



East - West Passenger Rail Study Final Report

Massachusetts Department of Transportation

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1. Executive Summary

The Massachusetts Department of Transportation (MassDOT) launched the East – West Passenger Rail Study to examine the potential benefits, costs, and investments necessary to implement new passenger rail service connecting western Massachusetts communities with central and eastern Massachusetts (Figure ES-1). The 2018 Massachusetts State Rail Plan included a recommendation to evaluate a "Western Massachusetts to Boston Passenger Rail Service Study," and community leaders, stakeholders, and residents have expressed a desire for such a passenger rail link to enhance multi-modal transportation options available for Massachusetts communities west of Worcester.

The East-West Passenger Rail Study:

- Identifies transportation corridors that provide new passenger rail connections between Pittsfield, Springfield, Worcester, Boston, and intermediate communities.
- Assesses the geographic, infrastructure, and demographic conditions in the East – West rail corridor.
- Evaluates potential improvement alternatives for enhancing passenger rail connections among the Corridor communities.
- Summarizes the projected benefits, costs, impacts, and trade-offs of the improvement alternatives.

The study has entailed a comprehensive civic engagement process involving residents, the study's Advisory Committee—a group comprised of individuals representing diverse perspectives from Pittsfield to Boston, and other stakeholders in a series of meetings and through online interaction. This included cooperative development of the following goals for the project:

- Provide better transportation options to and from Western Massachusetts
- Support economic development throughout the East – West rail corridor
- Improve the attractiveness of Western Massachusetts as an affordable place to live
- Reduce the number of automobile trips along the corridor
- Reduce greenhouse gas emissions and air quality impacts from transportation

MassDOT recognizes that a robust transportation system is essential to providing residents, businesses, and visitors with mobility to satisfy their economic, personal, and recreational needs. Passenger rail transportation can be an important component of a multi-modal transportation system that increases travel options and reduces greenhouse gas emissions.

Figure ES-1 -- Study's Central Question

The East – West Passenger Rail Study is intended to answer the central question:

How can we connect people in western Massachusetts with central and eastern Massachusetts using a passenger rail service that provides fast, frequent, attractive service in a cost-effective and achievable manner?

Fast and frequent passenger rail service in the East-West Rail Corridor could enhance mobility and connectivity for Corridor communities, provide residents and stakeholders with additional travel options, and catalyze new economic opportunities, such as development around stations. Improved connectivity among job centers and better mobility for potential workers could increase employment opportunities for workers and expand the talent pool available to employers by better linking the western, central, and eastern regions of the Commonwealth with each other and with a broader travel market.

1.1. Preliminary Alternatives Analysis

The East – West Passenger Rail Study conducted an alternatives analysis in order to identify the best solution to the study "problem" – How to connect people in western Massachusetts with central and eastern Massachusetts using a passenger rail service that provides fast, frequent, attractive service in a cost-effective and achievable manner?

To answer this question, the alternatives analysis process developed a set of potential solutions, and evaluated how well each one balances these key considerations:

- Benefits: Maximize travel speeds, frequency, and service quality to attract the most riders
- Costs: Minimize capital, operations & maintenance costs
- Impacts: Minimize impacts to property, buildings, open space, and wetlands

To enable MassDOT, the Advisory Committee, residents, and other stakeholders to understand the full range of potential solutions and their trade-offs, six Preliminary Alternatives were developed from a broad set of potential concepts. These Preliminary Alternatives took different approaches to providing improvements, and achieved different levels of speed increase, travel time, frequency, service quality, cost, and impacts. The following are the key factors that were considered in assembling the Preliminary Alternatives.

- Infrastructure Investments and Speed Improvements. These investments correspond to the general approach to providing a new or improved rail line, the type and degree of physical improvements to the rail infrastructure, and the degree to which passenger and freight traffic can be separated. It is these investments that determine one of the most important characteristics of the East – West passenger rail service, the travel speed. The greater the level of infrastructure improvement and separation of passenger and freight operations, the higher the speed of service.
- Service Elements. The following are service quality characteristics that were assigned to the Preliminary Alternatives to enable a full assessment of their benefits and impacts.
 - Frequency – The frequency of East – West passenger rail service varies across the Preliminary Alternatives, and generally increases with the degree of infrastructure investment.
 - Extent of Rail Service – Some of the Preliminary Alternatives entail passenger rail service to Pittsfield, while some extend rail service to Springfield, with a bus connection to Pittsfield.
 - Stations Served – All Preliminary Alternatives serve the major corridor cities of Pittsfield, Springfield, Worcester, and Boston, while some also serve intermediate towns.

Table ES-1 provides a summary of the six Preliminary Alternatives and their key characteristics:

- The maximum speed increases steadily across the alternatives, and the travel time steadily decreases.
 - Compared to the existing Lake Shore Limited service, Alternative 3, which provides a one-seat ride between Pittsfield and Boston, cuts roughly 30 – 45 minutes off the trip between Pittsfield and Boston, and roughly 25 – 40 minutes off the trip between Springfield and Boston.
 - NOTE: The range describes variations in travel times for each alternative, depending upon the specific level of infrastructure improvements.
 - A dedicated passenger-only track parallel to the existing CSX rail line between Springfield and Worcester to adhere to CSX policy for accommodating passenger rail service on its right-of-way adds significant cost and complexity. Alternative 4 saves an additional 10 minutes compared to Alternative 3 at an estimated additional cost of \$1.5 billion.
 - Several "shortcut" realignments in Alternative 5 between Springfield and Worcester save an additional 10 minutes versus Alternative 4.
 - By building a completely new, separated rail alignment in the straighter I-90 corridor, Alternative 6 provides the fastest travel time of all the alternatives: 2:15 to 2:30 for Pittsfield – Boston travel, and 1:15 to 1:30 for Springfield – Boston travel. However, the cost of implementing a totally new railroad line is much higher than the other alternatives.
- Alternatives 1, 2, and 5 would provide bus service between Pittsfield and Springfield, and would require a transfer to the rail service. This has significant negative impacts on travel time and attractiveness of the service.

Table ES-1 – Passenger Rail Service Characteristics – Preliminary Alternatives

METRIC /	ALTERNATIVE	NO-BUILD	1	2	3	4	5	6
CORRIDOR TYPE +	ALIGNMENT	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
FREQUENCY	RAIL ROUND TRIPS	1	5	7	8	10	10	18
SPEEDS	MAX. PERMITTED (MPH)	80	80	80	90	110	110	150
TRAVEL TIMES RANGE	PITTSFIELD – BOSTON	3:50	3:55 – 4:10	3:35 – 3:50	3:05 – 3:20	2:55 – 3:10	2:55 – 3:10	2:15 – 2:30
TRAVEL TIMES RANGE	SPRINGFIELD – BOSTON	2:28	2:40 – 2:55	2:10 – 2:25	1:50 – 2:05	1:40 – 1:55	1:30 – 1:45	1:15 – 1:30
EAST-WEST STATIONS	PITTSFIELD	✓	(Bus)	(Bus)	✓	✓	(Bus)	✓
EAST-WEST STATIONS	LEE	-	(Bus)	(Bus)	-	-	(Bus)	✓
EAST-WEST STATIONS	CHESTER	-	-	-	✓	✓	-	-
EAST-WEST STATIONS	BLANDFORD	-	(Bus)	(Bus)	-	-	(Bus)	✓
EAST-WEST STATIONS	SPRINGFIELD	✓	✓	✓	✓	✓	✓	✓
EAST-WEST STATIONS	PALMER	-	✓	✓	✓	✓	-	✓
EAST-WEST STATIONS	WORCESTER	✓	✓	✓	✓	✓	✓	✓
EAST-WEST STATIONS	LANSDOWNE	✓	✓	✓	✓	✓	✓	✓
EAST-WEST STATIONS	BACK BAY	✓	✓	✓	✓	✓	✓	✓
EAST-WEST STATIONS	SOUTH STATION	✓	✓	✓	✓	✓	✓	✓

1.2. Final Alternatives Analysis

Based on the results of the Preliminary Alternatives analysis and feedback from the Advisory Committee, stakeholders, and members of the public, the alternatives were narrowed to a set of three Final Alternatives that all include the following preferred characteristics:

- Rail operations for the full East – West Corridor, from Pittsfield to Boston, via the Boston – Albany railroad mainline.
- Service to all stations in the Corridor, including in smaller intermediate communities: Pittsfield, Chester, Springfield, Palmer, Worcester, Lansdowne, Back Bay, and South Station.
- Passenger rail service in the existing rail corridor; the cost of building a new railroad line in the I-90 corridor (in Alternative 6) was judged to be not worth the incremental travel time savings.

Therefore, the three Final Alternatives comprise the following:

- **Alternative 3** (same as Preliminary Alternative 3, shown in Figure ES-2) could provide direct passenger rail service between Pittsfield and Boston along a shared track / shared CSX and MBTA corridor. Up to 8 round trips (7 new East-West round trips) could be provided, with an average travel time of 3:09 between Pittsfield and Boston, and 1:57 between Springfield and Boston. The figures on the following pages for the Final Alternatives show the alignment of the alternative; the stations served; and the improvements proposed for the alignment (e.g. double-tracking, new rail alignment, etc.). The figures also show a diagram of the rail line with the "Speed Operated:" this is the calculated speed for each segment of the corridor, based on the detailed train performance calculations and service schedule.
- **Alternative 4** (same as Preliminary Alternative 4, shown in Figure ES-3) could provide direct passenger rail service between Pittsfield and Springfield along a shared track / shared CSX corridor, along an independent passenger track between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 10 round trips (9 new East-West round trips) could be provided, with an average travel time of 2:59 between Pittsfield and Boston, and 1:47 between Springfield and Boston.
- **Hybrid Alternative 4/5** (combines elements of Preliminary Alternatives 4 and 5, shown in Figure ES-4) could provide direct passenger rail service between Pittsfield and Springfield along a shared track / shared CSX corridor, along an independent passenger track with high-speed shortcuts between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 10 round trips (9 new East-West round trips) could be provided, with an average travel time of 2:49 between Pittsfield and Boston, and 1:37 between Springfield and Boston.

The following key metrics have been evaluated for the alternatives analysis:

- **Ridership.** The ridership forecasts for the alternatives are a critical metric of the overall attractiveness of the proposed alternatives for travelers; it is determined by a combination of demographics (residents and jobs) surrounding the stations and the service quality (travel time and frequency to the traveler's destination). Ridership is the basis for determining project benefits relative to travel time savings, motor vehicles taken off the highways, air quality improvements, and other measures of project benefit. The total annual trips described on the following page are the trips that are projected on the East – West passenger trains for a mature service in the year 2040. These numbers represent "boardings," i.e.

each time a passenger gets onto a train is a boarding (a round trip would count as two). The ridership range was produced by two independent forecasts, with different assumptions, that used two different proxy rail corridors (i.e., the CTail Hartford Line and the Downeaster) as the starting point. On average, roughly 62% of the estimated ridership is expected to be trips between Springfield and Boston.

- Alternative 3 is projected to be used by 922 to 1,188 passengers per weekday.
 - Alternative 4 is projected to be used by 1,157 to 1,379 passengers per weekday.
 - Hybrid Alternative 4/5 is projected to be used by 1,296 to 1,554 passengers per weekday.
- **Capital Costs.** The capital cost estimate is a key determinant of the challenge of implementation for a given alternative. The capital cost estimates reflect one-time investments in new infrastructure, e.g. new/upgraded stations, track, bridges, yards, utility relocation, signals, property acquisition, vehicle procurement, and professional services. The total also includes a series of contingencies in accordance with standard practices. These capital costs, expressed in 2020 dollars, range from \$2.4 billion for Alternative 3 to \$3.9 billion for Alternative 4 and \$4.6 billion for Hybrid Alternative 4/5.
 - **Operations & Maintenance Costs.** These are the annual costs associated with operating and maintaining the service, including labor, fuel, upkeep of facilities and vehicles, and administration.
 - **Environmental and Community Impacts.** These include impacts to public and private property, open space, and environmental resources such as open water and wetlands. Grade crossings are included as a safety-related impact.
 - For example, Alternative 3 has the fewest impacts to wetlands by total acreage (0.45 acres). This increases with the addition of separated track—Alternative 4 impacts 7.73 acres. Similarly, affected Article 97 lands comprise 3 acres under Alternative 3 and more than triple under Alternative 4, and comprise nearly 15 acres under Hybrid Alternative 4/5.
 - Compared to the 2040 Future No-Build, the net CO2 emissions (in metric tons) increase and range from approximately 7,000 to 8,000 under Alternative 3 and increase up to over 14,000 under Alternative 4 and the Alternative 4/5 hybrid.
 - Alternatives 3 and 4 require 30 improved at-grade crossings; Hybrid Alternative 4/5 requires 27.

Figure ES-2 -- Final Alternative 3 – Passenger Rail, Pittsfield – Boston, on Upgraded Existing Railroad Tracks

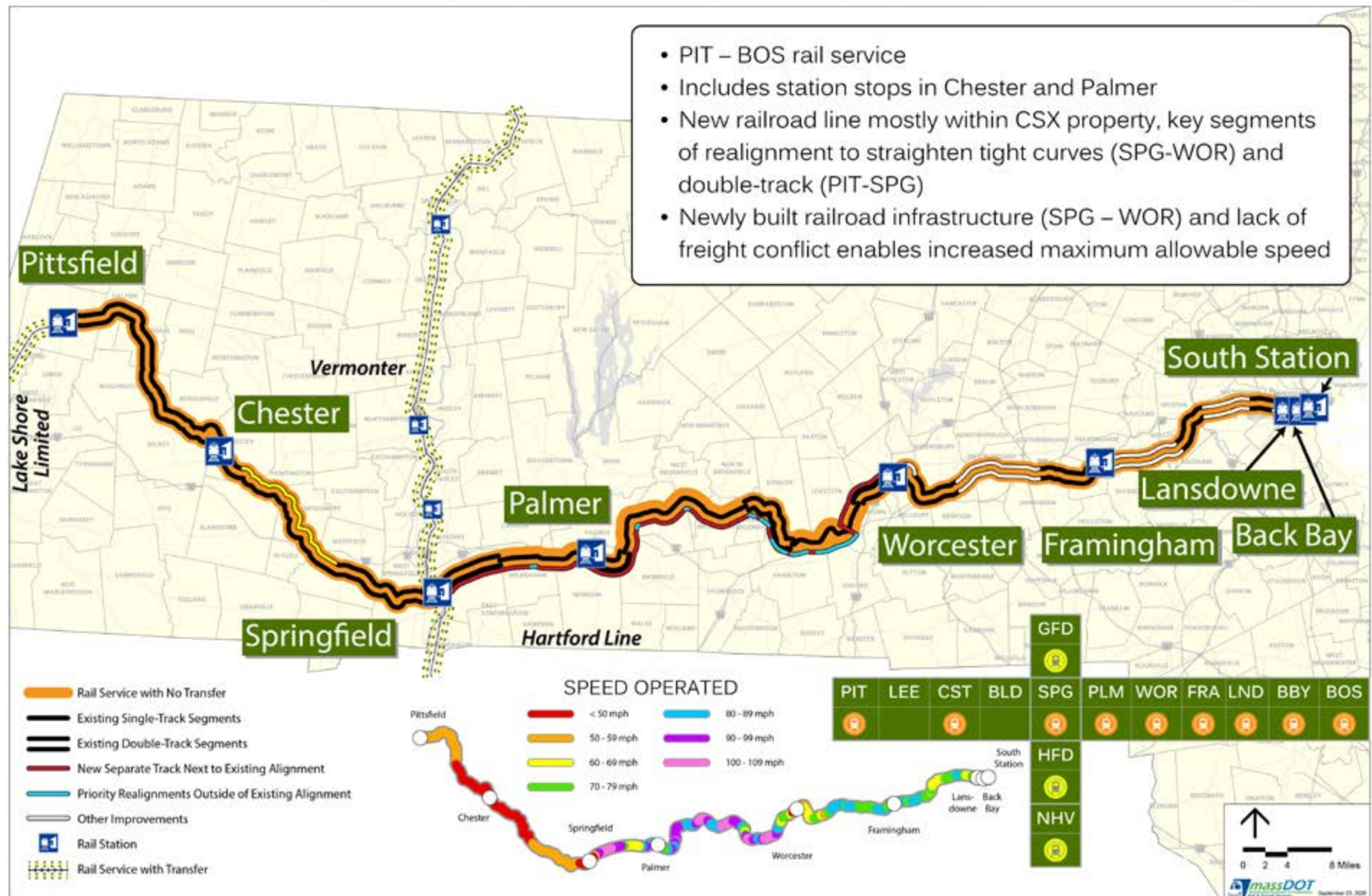


Figure ES-3 -- Final Alternative 4 -- Passenger Rail, Pittsfield -- Boston: Upgraded Existing Rail (PIT -- SPG), New Rail in CSX Corridor (SPG -- WOR)



- PIT – BOS rail service
- Includes station stops in Chester and Palmer
- New railroad line mostly within CSX property, double-track PIT - SPG
- Newly built railroad infrastructure (SPG – WOR) and lack of freight conflict enables increased maximum allowable speed

Figure ES-4 -- Final Alternative 4/5 Hybrid – Passenger Rail, Pittsfield – Boston: Upgraded Existing Rail (PIT – SPG), New Rail with Priority Realignments (SPG – WOR)



1.3. Key Findings

Key findings from the Final Alternatives analysis include:

- A reduction in travel times by as much as one hour over currently feasible times could be possible with new investment in the rail infrastructure between Pittsfield and Boston.
- Commuter, business, and recreational travel markets are present to varying degrees along the corridor. The study did not examine the possible long-term impacts of the COVID-19 pandemic on travel patterns or demographics.
- Passenger rail and CSX operations within an enhanced shared-track environment would require careful coordination of services and clear operational criteria, as well as an agreement with CSX as owner of the line west of Worcester.
- Passenger rail service operated between Springfield and Worcester over an independent alignment adjacent to CSX track(s) appears to be feasible, could eliminate most of the interference between the two types of operations (passenger and freight) in this segment, and could reduce travel time in the segment by 10 minutes. However, building this independent alignment to adhere to CSX requirements for passenger service on their right-of-way adds significant cost and complexity. The estimated capital cost of complying with CSX design criteria is approximately \$1.5 billion. Additional alignment improvements that are expected to save an additional 10 minutes are projected to cost \$765.4 million.

Table ES-2 – Pros and Cons of Final Alternatives

ALTERNATIVE	ALTERNATIVE 3	ALTERNATIVE 4	4/5 HYBRID
PROS	• Convenient and comfortable travel • Lowest capital cost • Fewest land impacts • Fewer grade-crossing impacts	• Convenient and comfortable travel • Reduced travel times / faster speeds • Higher ridership • Reduced passenger / freight interference	• Convenient and comfortable travel • Lowest travel times / fastest speeds • Highest ridership • Reduced passenger / freight interference • Fewer grade-crossing impacts
CONS	• Longest travel times / slowest speeds • Lowest ridership • Greatest passenger / freight interference	• Higher capital cost • Greater land impacts • Higher grade-crossing impacts	• Highest capital cost • Greatest land impacts

- Each alternative offers a set of positive (Pro) and negative (Con) attributes that must be considered to make an informed decision on the overall benefits provided by the alternative.

MassDOT acknowledges the preference of several Advisory Committee members to prioritize the 4/5 hybrid alternative, but at this stage MassDOT recommends keeping Alternatives 3 and 4 under consideration, as additional information may be worth considering before the focus is narrowed to one alternative. Moreover, the necessary next steps do not require the selection of one alternative.

There is additional work to be done to fully complete the conceptual planning stage for East-West Rail service. This work includes discussions with CSX about its requirement for complete separation of the passenger operations from its own tracks, the development of a governance structure for passenger rail outside the MBTA service area, and a more detailed study of economic and community benefits and impacts. These tasks and others could advance opportunities for turning East-West Passenger Rail from a subject of study to a project that can be designed, permitted, funded, built, and operated.

Key trade-offs among the Final Alternatives are shown in Table ES-2.

1.4. Next Steps and Recommendations

The East – West Passenger Rail Study is a substantial step forward in realizing the potential for enhanced service within the corridor. The following areas have been identified as next steps to continue advancing the conceptual planning phase for East-West Passenger Rail.

During this time of fiscal uncertainty, MassDOT will review what federal transportation planning grants may be available to support some of the work described. These next steps are recommended to gather additional information that could inform the development of an East-West Passenger Rail corridor beyond the analysis contained in this study.

Further Discussion of CSX Requirements

Simply put, CSX policy regarding accommodation of passenger rail service on its right-of-way adds significant cost and complexity because it favors complete separation of the passenger operations from its own tracks whenever possible. The estimated additional capital cost for complying with CSX's design criteria is approximately \$1.5 billion.

Therefore MassDOT will:

- Continue discussions with CSX to ascertain the basis for their policies and requirements related to shared operations with passenger service and whether their support for an East-West passenger service is possible and, if not, what other options exist;
- Ask CSX to cooperate in additional analysis such as rail capacity modeling and right-of-way condition;
- Seek to conduct a life-cycle cost analysis, if possible, to determine the full spectrum of costs associated with greater control over the right-of-way; and
- As commenters such as the Metropolitan Area Planning Council (MAPC) and the Sierra Club have suggested, a phased approach may be worth considering and discussing with CSX.

Phasing has proved useful with other projects in Massachusetts – most recently the South Coast Rail project. A phased approach could focus on specific improvements that offer benefits such as safety and increased reliability or could address infrastructure in a particular segment. Whether a pilot service would be worthwhile is uncertain given the current operational impediments, but it may be explored as part of a phased approach and could also include working with Amtrak on any plans for service to Albany.

Detailed Study of Economic and Community Benefits and Impacts

Several stakeholders have correctly noted that this study does not fully capture some of the potentially transformative economic and demographic impacts and benefits of East-West Passenger Rail, i.e., an exploration of long-term demographic and growth patterns for western Massachusetts and how an East-West rail corridor could be one of several focused policies to promote affordable living and economic development in western Massachusetts. This study did not include these important issues because such travel and demographic changes are not captured by a standard transportation analysis, but MassDOT agrees that such an analysis is a critical next step to more fully understand the benefits of East-West rail.

Exploring this issue would require investigation of current and prospective factors affecting regional growth. Such a study would begin with a literature review and an examination of case studies of similar projects elsewhere. The inquiry could then focus on what economic and demographic results were achieved and what other changes – apart from new rail service – were significant contributors to the results. If funded, MassDOT would look for significant participation in developing the study parameters and assumptions by the Metropolitan Planning Organizations and businesses. That input would be particularly important to assessing factors other than improved train service.

These might include changes in regional land use or housing policy.

Several commenters also noted that this study does not consider the long-term travel impacts of the current pandemic – particularly the possibility that remote working will become more common and that for many people the home-work distance will be lengthened.

MassDOT will be evaluating how travel patterns have changed and may continue to change and apply this evaluation in a variety of contexts, not only to the demand for passenger rail but also to issues such as its effects on congestion in greater Boston and potential increases in off-peak travel demand. A new travel option along the East-West corridor could be one of the scenarios examined as part of that broader inquiry.

These analyses may also be useful in determining whether phasing development of the corridor could provide a more viable path forward. For example, because roughly 62% of the estimated ridership is expected to be trips between Springfield and Boston, this segment may be a worthwhile starting point.

Understand Governance Options for Expanded Passenger Rail in Western Massachusetts

MassDOT does not have the capacity to operate as a railroad or to manage rail operations, and the MBTA is limited to operations within its legislatively-mandated service area. Given these limitations, a new public governance structure would be needed to support and direct operation of any of the three Final Alternatives, as well as any other non-pilot, permanent passenger rail services in western Massachusetts.

While the Legislature must ultimately decide how to best address the issue of governance for passenger rail in western Massachusetts, MassDOT would be happy to help advance the public debate and frame the legislative options by convening key elected stakeholders to discuss the legal and policy implications of different governance structures. MassDOT will rely on the input from these stakeholders to scope and develop a white paper to identify options for a governance structure for passenger rail outside the MBTA service district. This white paper could also form the basis of a legislative proposal. This collaboration with legislators will help ensure that policy goals are met and there is a viable mechanism to address governance for passenger rail within the Commonwealth.

While the exact form and substance of the white paper's scope will be determined in consultation with these elected stakeholders, MassDOT expects the work to consider issues such as the following:

- Legal/regulatory, operational, and financial characteristics of intercity and commuter rail service
- Structure and capacity of public entity to:
 - Evaluate and develop information about options
 - Develop funding and financing strategy, including fare policy
 - Provide management and oversight during
 - a. Construction
 - b. Operation
- Powers and authority of passenger rail entity, including:
 - Legal ability to provide or contract for commuter rail and/or intercity service
 - Technical capacity to provide or contract for commuter rail and or intercity service
 - Eligibility to receive and manage federal and other funds
 - Liability limitations and risks
 - Establishing balance between operating independence and public control
- Life-cycle costs of acquiring and supporting public interest in the right-of-way and related assets
- Funding sources and financing methods
 - Development through construction
 - Operations (including any subsidy required for the assumed fare policy)
 - Maintenance and capital renewal
- Scope of functions to be undertaken by an operating railroad, including:
 - Maintenance of the right-of-way, including stations and layover areas
 - Safety and regulatory compliance
 - Securing and maintaining equipment, including locomotives and coaches
 - Development of service plan and terms under which schedule can be altered
 - Providing security
 - Handling ticket sales and fare collection, engaging, and directing personnel
 - Operating trains safely and on schedule
- Dispatching all trains and/or coordinating with dispatch operations of other railroads

Evaluation of Funding Sources and Strategies

The East – West Passenger Rail project is a large and complex project that would require large capital investments as well as ongoing operations and maintenance funding, likely necessitating a combination of many different funding sources and strategies. MassDOT will coordinate efforts with state and federal elected officials and other key stakeholders to evaluate and identify potential funding sources. Project phasing, as discussed earlier, can also be evaluated in context with funding opportunities.

A major impediment to federal funding is the current methodology used by the U.S. Department of Transportation to conduct the benefit-cost analysis. Because the federal methodology considers only a limited range of benefits, the Commonwealth could not obtain any federal funding for South Coast Rail and likely would not qualify for federal funding for East-West Rail. MassDOT will work with the Congressional delegation and other key stakeholders to advocate for changes to the federal benefit-cost analysis method to better capture all of the potential benefits of investment in passenger rail.

MassDOT will also work with elected officials and key stakeholders to catalogue existing and potential federal funding sources, an effort that will depend in part on the findings from the governance white paper with respect to what entity would be the recipient of such funding.

2. Introduction

2.1. Study Rationale

Community leaders, transportation stakeholders, and members of the public have expressed a desire for an enhanced passenger rail link among communities in western Massachusetts, central Massachusetts, and the Boston area. This desire reflects dissatisfaction with the multi-modal transportation options west of Worcester, which make Massachusetts communities west of Worcester reliant on motor vehicle travel via highways that are frequently congested east of Worcester. This can represent a significant barrier to travel from the western part of the Commonwealth.

In response to these issues and concerns, the 2018 Massachusetts State Rail Plan included a recommendation for evaluation of a "Western Massachusetts to Boston Passenger Rail Service Study." The East – West Passenger Rail Study, initiated by MassDOT in late 2018, represents the implementation of that recommendation.

Passenger rail service among the communities and attractions of western, central, and eastern Massachusetts could provide greater connectivity across the Commonwealth, enhance mobility, and create new economic development opportunities.

The East-West Passenger Rail Study:

- Identifies transportation corridors that provide new passenger rail connections between Pittsfield, Springfield, Worcester, Boston, and intermediate communities.
- Assesses the geographic, infrastructure, and demographic conditions in the East – West rail corridor.
- Evaluates potential improvement alternatives for enhancing

passenger rail connections among the Corridor communities.

- Summarizes the projected benefits, costs, impacts, and trade-offs of the improvement alternatives.
- Was guided by an Advisory Committee.
- Identified potential Next Steps and Recommendations for consideration to advance a project.

MassDOT recognizes that a robust transportation system is essential to providing residents, businesses, and visitors with mobility to satisfy their economic, personal, and recreational needs. Passenger rail transportation can be an important component of a multi-modal transportation system that increases travel options and reduces greenhouse gas emissions.

Fast and frequent passenger rail service in the East-West Rail Corridor could enhance mobility and connectivity for Corridor communities, provide residents and stakeholders with additional travel options, and catalyze new economic opportunities, such as development around stations. Improved connectivity among job centers and better mobility for potential workers could increase employment opportunities for workers and expand the talent pool available to employers by better linking the western, central, and eastern regions of the Commonwealth with each other and with a broader travel market.

Massachusetts's railroad network provides passenger rail connections to much of the Commonwealth's population. MassDOT has undertaken efforts to restore and/or enhance Massachusetts Bay Transportation Authority (MBTA) commuter rail service to Boston, to "gateway" cities¹ and suburban communities throughout eastern Massachusetts. MassDOT has implemented significant improvements to service frequency and speed for the MBTA Framingham/Worcester and Fitchburg Commuter Rail Lines, and continues to advance restoration

of passenger rail service to Fall River and New Bedford through the South Coast Rail project.

At the same time, Springfield and surrounding areas have benefited from regional intercity passenger rail improvements, including the CTraill Hartford Line, Knowledge Corridor investments, and new services such as the Valley Flyer pilot.

Nevertheless, passenger rail connections from Springfield and Pittsfield to central and eastern Massachusetts remain limited to Amtrak's Lake Shore Limited. Decreased travel demand during the COVID-19 pandemic has led Amtrak to reduce the frequency of the Lake Shore Limited from one daily round trip to three round trips per week.

MassDOT is undertaking the East-West Passenger Rail Study to build upon other recent transportation system initiatives; to better understand the travel demand and needs in the Pittsfield – Springfield – Worcester – Boston corridor; and to develop strategies for improving access and enhancing economic and other opportunities for residents, businesses, and visitors in the Commonwealth. The outcome of this study will be a clearer assessment of the conceptual costs and impacts of enhanced rail service in the corridor, and MassDOT's conclusions regarding appropriate next steps.

Throughout the course of the study, a robust Civic Engagement process has involved residents, businesses, elected officials, and other key stakeholders. This process entailed public meetings, Study Advisory Committee meetings, briefings of business and community groups, and on-demand information provided through a project website.

¹ Massachusetts gateway cities are midsize cities facing socio-economic challenges that create obstacles to realizing their full potential. Three of the original eleven gateway cities are located in the East – West corridor: Pittsfield, Springfield, and Worcester.

2.2. Study Goals

Building upon this study context and rationale, MassDOT worked with the Advisory Committee, project stakeholders, and the public to identify the following project goals:

- Provide better **transportation options** to and from Western Massachusetts
- Support **economic development** throughout the East – West rail corridor
- Improve the attractiveness of Western Massachusetts as **an affordable place to live**
- Reduce the number of **automobile trips** along the corridor
- Reduce **greenhouse gas emissions** and **air quality impacts** from transportation

In developing and evaluating the study's alternatives, the improved transportation and mobility benefits achieved relative to these goals must be balanced against project costs and impacts. The major impact and cost elements to be considered include:

- Extent and severity of environmental and community impacts
- Potential impacts to rail-based freight and MBTA Commuter Rail operations
- Capital costs and operations and maintenance costs

These project goals and impact considerations have shaped the development of the study's alternatives, as well as the evaluation criteria that have been used in the Alternatives Analysis, discussed in Chapter 4.

2.3. Study Corridor

Implementation of an East – West passenger rail service requires a continuous, linear corridor that passes through the communities to be served. Without a continuous corridor, it would be impossible for trains to operate between stations. It is also important that the corridor provide an alignment that is straight enough to achieve speeds required for competitive passenger rail service, and wide enough to accommodate the railroad infrastructure needed to provide service.

The definition of the East – West rail corridor begins with identifying the communities to be served. The East – West Passenger Rail Study is intended to evaluate opportunities for providing passenger rail service among Pittsfield, Springfield, Worcester, and Boston, with the potential for service to intermediate communities.

An East – West rail corridor connecting these communities requires:

- A continuous corridor that can accommodate a railroad alignment with connections to the service communities
- Rail infrastructure, including tracks, signals, and other infrastructure that supports rail service
- Railroad stations within the service communities
- A service provider, governance structure, and funding

The East – West Passenger Rail Study addresses the first three requirements listed. First, the Massachusetts geography was reviewed to identify any potential linear corridors for connecting these service communities. Creating a new, dedicated transportation corridor for an East – West passenger rail service was considered and rejected. An entirely new transportation corridor would entail land acquisition needs that would have major residential, environmental, historic, and community impacts, which would render such a new corridor infeasible from both a practical and environmental permitting perspective,

especially if existing linear corridors with lesser impacts are available. Fortunately, such existing corridors are available; these are generally existing east – west-oriented rail and highway transportation corridors. A corridor that would depend on a mixture of intercity bus and intercity rail was also rejected as contrary to the study's goals, particularly for the area west of Springfield.

Boston – Albany Rail Mainline

The Boston – Albany rail mainline corridor offers many advantages as a potential East – West passenger rail corridor. It provides a continuous linear corridor with existing railroad track, signal, and other ancillary infrastructure.

The Boston – Albany rail mainline provides connections to all service communities, including existing rail stations in all the major cities: Pittsfield, Springfield, Worcester, and Boston. West of Worcester, the rail corridor is owned by CSX Transportation, the third-largest North American freight railroad (by 2019 revenues) and the largest freight railroad operating in New England. East of Worcester, the rail line is owned by the Commonwealth of Massachusetts.

The Boston – Albany corridor traverses a succession of north-south river systems and an ascent through the Berkshire Mountains. The challenging topography required the builders to follow an alignment with multiple sharp curves to maintain reasonable gradients that were within the capabilities of 19th Century construction methods. This presents challenges to operating a higher-speed passenger rail service.

Interstate 90/Massachusetts Turnpike

The second corridor that was identified as having potential for accommodating East – West passenger rail service is along the Interstate 90/Massachusetts Turnpike (I-90) corridor. This corridor

provides many advantages for accommodating an East – West rail alignment. It is a continuous linear corridor that is already owned by the Commonwealth of Massachusetts. In addition, it is generally wider and straighter than the Boston – Albany rail mainline, which could enable the creation of a lower-curvature, higher-speed rail line. Figure 2-1 shows ownership and freight terminals along the existing rail corridor, as well as the alignment of the Massachusetts Turnpike.

However, use of the I-90 corridor for a rail line would also present several challenges. The Massachusetts Turnpike is a grade-separated expressway, with many bridges that carry the highway over or under roadways that cross it. A new railroad line would have impacts on these bridges, as well as on highway access ramps. In addition, the I-90

corridor climbs steeper grades that automobiles and trucks can navigate, but that are more difficult for trains. This would require infrastructure – either elevated viaducts or excavated depressed segments – in numerous locations in order to create grades that trains can traverse. The I-90 corridor is also severely space-constrained in some segments, in particular the section of the highway from downtown Boston to Route 128/Interstate 95. The I-90 corridor also does not provide direct connections to downtown Pittsfield, Springfield, or Worcester, and would require supplemental connections using new access alignments to those destinations.

Figure 2-1 – Railroad Ownership, Existing and Potential Passenger Stations, and Relevant Freight Rail Terminals



Northern Tier/Patriot Corridor – Fitchburg Line

Another corridor that was reviewed for the potential to accommodate East – West rail is the so-called "northern tier" rail corridor. This corridor generally parallels Route 2 in the northern portion of Massachusetts. It comprises two principal segments: west of Fitchburg, the "Patriot Corridor" freight rail line; east of Fitchburg, the MBTA Fitchburg Line commuter rail provides connections for 18 stations to Boston's North Station. This corridor was not pursued as a viable East – West connection because it does not provide direct or proximate rail connections to Springfield or Pittsfield, two of Massachusetts' original gateway cities. While adding a new rail service along either the Boston – Albany mainline or the "northern tier" rail corridor would increase passenger rail service through gateway cities already served by MBTA Commuter Rail another original gateway city, Greater Worcester represents a larger market than Fitchburg-Leominster.

2.4. Study Context

The potential for implementation of a passenger rail service in the East – West corridor is informed by many previous, ongoing, and future transportation projects and planning studies. The following section summarizes the relevant projects and studies that have significant bearing on the analysis and assumptions of the study, along with the key issues that pertain to the evaluation and potential implementation of the East – West Passenger Rail project.

Northern New England Intercity Rail Initiative (NNEIRI). The NNEIRI study is an important predecessor to the East – West Passenger Rail Study. NNEIRI completed a planning and environmental review of

passenger rail in New England, with a study area that included the Boston – Springfield segment of the East – West study corridor.

The states of Massachusetts, Connecticut, and Vermont collaborated with the Federal Railroad Administration (FRA) to evaluate the potential for a safe and efficient intercity passenger rail system that seamlessly links major cities in New England. To advance this vision, the NNEIRI study evaluated infrastructure and service improvements for providing high-speed passenger rail for connections between Boston and Montreal, Boston and New York, and New York and Montreal. This study included the segment of the East – West Corridor between Springfield and Boston along the Inland Route, as shown in Figure 2-2.

Figure 2-2 – Northern New England Intercity Rail Initiative (Credit: NNEIRI)



In 2016, the NNEIRI study completed a Tier 1 Environmental Assessment (EA) through the National Environmental Policy Act (NEPA). The NNEIRI Tier 1 EA assessed corridor-level benefits and impacts. It included an Alternatives Analysis and a Service Development Plan, which provided evaluation of three alternatives with a range of improvements, costs, speeds, and frequencies. Alternatives with speeds greater than 90 mph were not advanced due to right-of-way constraints. As a result, the best travel time for NNEIRI alternatives was 1:49 between Boston and Springfield. Based on the EA, the Federal Railroad issued a Finding of No Significant Impact (FONSI), which determined that the project would have no significant environmental impacts and could move forward without an Environmental Impact Statement. The next phase of review would be a Tier 2 NEPA review, which would investigate more detailed project-level benefits and impacts.

Relevant Projects and Studies Assumed to be Operational Prior to East – West Implementation. Since the publication of NNEIRI in 2016, significant infrastructure improvements have been completed or are being actively pursued along key Corridor segments, which could be beneficial for increased passenger rail service, particularly between Worcester and Boston and in Springfield. In addition, several other projects and initiatives have been completed and other significant infrastructure improvements have been studied but not yet funded or implemented. Because the following projects and services are either complete or well advanced in the project development and environmental process, they were assumed to be operational as part of the "future baseline" condition for the study analysis. It should be noted that construction of these projects, including South Station Expansion, were assumed in the future baseline condition even though they are not currently funded projects; their costs are not included in the East – West Passenger Rail Study's conceptual cost estimates.

Completed Studies and Projects

- **New Haven – Hartford – Springfield (NHHS) Program (CTrail Hartford Line):** In Connecticut, a robust regional rail service between New Haven, Hartford, and Springfield was inaugurated in 2018 via the NHHS High-Speed Intercity Passenger Rail (HSIPR) Project. The improvements increased maximum permitted speeds to 110 miles per hour (mph), reduced travel times and conflicts with freight trains along shared segments, and increased frequencies from 6 to 16 daily round trips in addition to the St. Albans to Washington, DC Vermonter Service operating the route.
- **Springfield Union Station Improvements:** In early 2020, MassDOT completed a major component of its long-term improvement program for Springfield Union Station. The installation of a new full-length, high-level Platform C enables the terminal to accommodate five-car trainsets and provide ADA-compliant level boarding.

Ongoing Studies and Projects

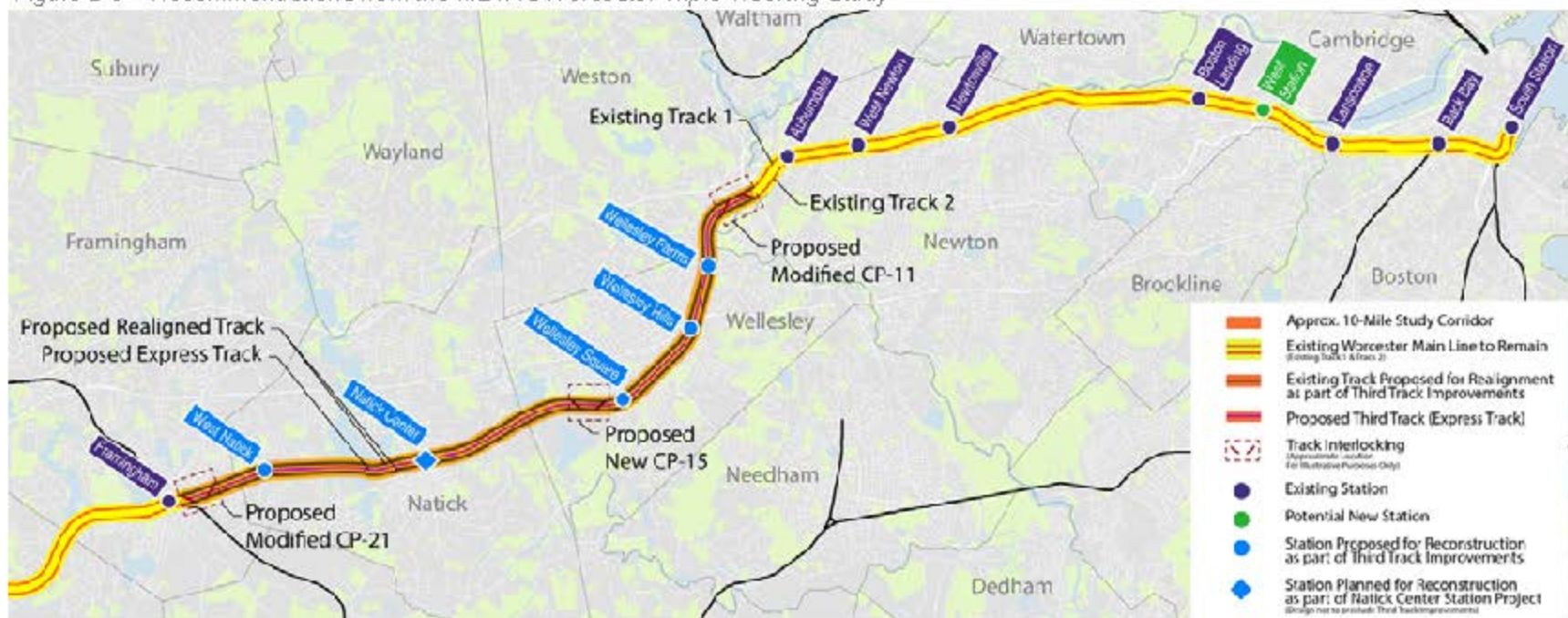
- **Knowledge Corridor:** In western Massachusetts, passenger service along the Connecticut River Line, which provides access to Greenfield, Northampton, and Holyoke en route to Springfield, was restored in 2014 after significant corridor rehabilitation. This alignment provided Amtrak's daily Vermonter Service with a more direct route between Brattleboro and Springfield. The Knowledge Corridor also currently provides service on the Valley Flyer; this two-year pilot service, which began in August 2019, is operated by Amtrak and provides two daily round trip trains between Greenfield, MA and New Haven, CT. It operates as an extension of Amtrak Hartford Line trains and provides service to the following station stops in Massachusetts: Springfield, Holyoke, Northampton, and Greenfield. The pilot service demonstration period occurred during the COVID-19 pandemic which could modify the evaluation criteria to reflect the impact to travel demand.

- **Worcester Triple Tracking Study:** The construction of 10 miles of new triple track rail sections between Route 128 and Framingham would improve rail line capacity and enable express trains and those with limited stops (such as the MBTA's Heart to Hub, Amtrak's Lake Shore Limited, and a new East – West Passenger Rail service) to bypass local commuter rail traffic. As shown in Figure 2-3, the project would entail moderate track realignments and major upgrades to signals, stations, bridges and highway grade crossings, and new interlockings as well as construction of the new 3rd mainline track. This project is not currently funded for construction.
- **Worcester Union Station Improvements:** As recommended in the NNEIRI study, the development of a new center island platform would increase operational capacity at Worcester Union Station for existing and future passenger services, including a potential East-West service, by allowing multiple trains to serve the terminal at

once. In addition, the project includes new passenger connections to the station and parking, as well as track and signal upgrades. This project recently completed the design phase. This project is not currently funded for construction.

- **South Station Expansion (SSX):** Boston's South Station is capacity-constrained, and expanding the station is a priority for increasing rail service to downtown Boston. The proposed expansion project would provide seven new tracks and four new platforms, as well a significant reconfiguration of existing track infrastructure, platforms, train layover facilities and passenger waiting spaces. MassDOT has completed environmental review and is advancing early action elements of the project. This project has been assumed operational for the purpose of analysis for East – West Passenger Rail service, but the full build is not currently funded.

Figure 2-3 – Recommendations from the MBTA's Worcester Triple Tracking Study



- **Worcester Line Positive Train Control (PTC) Upgrades:** By preventing trains from exceeding authorized speeds (including work zones) or colliding, PTC provides additional operational safety features. The MBTA has implemented PTC for the existing train control system along its Worcester Line from Boston to Worcester and is scheduled to complete work by December 30, 2020. CSX is implementing PTC from Worcester to Springfield and Pittsfield.

Other Potential Projects. The projects above are assumed to be part of the future condition that needs to be in place before an East – West Passenger Rail project could be implemented. In addition, there are several other potential projects that are less developed and have less certainty about their final configuration and likelihood of implementation.

While these projects have the potential to affect passenger rail services along the Corridor, they are not assumed to be in place as part of the East – West Passenger Rail baseline condition, and the successful operation of the East – West Passenger Rail service is not dependent upon their completion. Nevertheless, their key elements are summarized below.

- **Amtrak Northeast Corridor (NEC) Future:** This comprehensive study recommended integrating frequent service between Springfield and New Haven via the Hartford Line into Amtrak's future operations portfolio for the Northeast Corridor. NEC Future contemplated a dramatic increase in intercity trains serving Springfield by 2040, moving from a 2014 total of two daily trains to 35, with four Intercity and two Regional peak hour trains.
- **MBTA Rail Vision:** The MBTA undertook a comprehensive review of its Commuter Rail network to identify opportunities for significantly enhancing the system's transit capacity and access. After assessing a broad range of long-term infrastructure and service investment scenarios, the MBTA Fiscal Management and

Control Board endorsed the study's "full transformation" alternative. This option includes the electrification of the lines, expansion of the train fleet, and improvements to stations and rail lines. These upgrades could allow 15-minute service all day for "Inner Core" stations closer to Boston and at major "Key Stations" like Worcester.

- **MassDOT Allston Multimodal Project:** This project could rehabilitate the deteriorating Massachusetts Turnpike/Interstate 90 (I-90) viaduct and interchange in Boston's Allston neighborhood. The project is also expected to realign the highway, create new urban development opportunities, and enhance the multimodal transportation infrastructure in the area with a new layover facility for MBTA Commuter Rail, a new transit center (West Station), and improved track infrastructure. The expanded midday train layover facility, this project could divert some trains from South Station and relieve track congestion, which could provide additional terminal capacity for facilities could benefit servicing future East-West passenger trains.

2.5. Civic Engagement

The East-West Passenger Rail Study has entailed a comprehensive civic engagement process involving residents, the study's Advisory Committee, and other stakeholders in a series of meetings and through online interaction.

Advisory Committee. MassDOT developed an Advisory Committee consisting of individuals representing diverse perspectives from Pittsfield to Boston. The members include:

- Owners/operators along the corridor
- Legislative officials
- State officials
- Regional planning agencies
- Key municipalities
- Business groups

The Advisory Committee provided jurisdictional, policy, technical, and administrative input in advance of major decisions. Table 2-1 lists the members of the committee. In addition to participating in meetings, the Advisory Committee members also provided written comments on alternatives. They had a significant role in narrowing a wide range of options for improving mobility to six and then to three Final Alternatives for analysis.

The Advisory Committee met six times: in December 2018; July 2019; two meetings in February 2020; and online meetings in June and September 2020; these last two meetings were held online due to COVID-19 pandemic restrictions on public gatherings. Presentations were shared at each meeting and posted on the [project website](#). Participating members of the public were also able to provide feedback, questions or comments at each Advisory Committee meeting.

Table 2-1 – Advisory Committee Members

NAME	ORGANIZATION
Todd Bailey	Baystate Health
Rep. Natalie Blais	MA State House of Representatives
Sen. Joseph A. Boncore	MA State Senate
Jonathan Butler	1Berkshire
Patrick Carnevale	Western Massachusetts Office of the Governor
Sen. Harriette L. Chandler	MA State Senate
Sen. Jo Comerford	MA State Senate
Nancy Creed	Springfield Regional Chamber
Rep. Mindy Domb	MA State House of Representatives
Marc Draisen	Metropolitan Area Planning Council
Linda Dunlavy	Franklin Regional Council of Governments
Astrid Glynn	MassDOT
Daren Gray	Baystate Health
Richard Griffin	MassDevelopment

NAME	ORGANIZATION
John Haheisy	Massachusetts Association of Railroads
Sen. Adam Hinds	MA State Senate
Bill Hollister	Amtrak
Mayor Donald Humason	Westfield
Linda Leduc	Town of Palmer
Sen. Eric Lesser	MA State Senate
Paul Matthews	Worcester Regional Research Bureau
Thomas Matuszko	Berkshire Regional Planning Commission
Rep. Jim McGovern	US Congress
Rep. Seth Moulton	US Congress
Rep. Richard Neal	US Congress
Melissa Olesen	Office of Senator Edward J. Markey
Rep. Alice Hanlon Peisch	MA State House of Representatives
John Perez	Minority Business Council - Springfield Regional Chamber
Rep. Thomas M. Petrolati	MA State House of Representatives
Mayor Joseph Petty	City of Worcester
Janet A. Pierce	Central MA Regional Planning Commission
Rep. Smitty Pignatelli	MA State House of Representatives
Jody Ray	MBTA Commuter Rail
Kimberly H. Robinson	Pioneer Valley Planning Commission
Rep. Lindsay Sabadosa	MA State House of Representatives
Mayor Domenic J. Sarno	City of Springfield
Peter Schwartz	Federal Railroad Administration
Sandra Sheehan	Pioneer Valley Transit Authority
Rep. Todd Smola	MA State House of Representatives
Rick Sullivan	Western Massachusetts EDC
Tonia Tassinari	MA Dept. of Housing & Economic Development
Jeremy Thompson	495/MetroWest Partnership
Mayor Linda M. Tyer	City of Pittsfield

Public Meetings. MassDOT hosted three public meetings at key points in the process to share the information collected to date and gather ideas and comments from the public.

The first meeting, in March 2019, introduced the Study process and factors in the analyses. It included an open house with presentation boards that provided information on potential riders; employment along the corridor; speeds and travel times; physical conditions; other operators; a range of service alternatives; and examples in other corridors.

The second meeting was in February 2020. The main topic was the Alternative Analysis, including evaluation criteria, ridership methodology, the Alternatives Analysis, and questions and discussion. In addition to the Advisory Committee and first public meeting input, MassDOT received 75 emails commenting on these goals.

A third public meeting occurred in October 2020. This final meeting offered a review of the three Final Alternatives selected and a discussion of evaluation results, including costs, environmental and community impacts, and the Benefit-Cost Analysis.

All meetings offered accessible and multi-linguistic meeting materials consistent with MassDOT requirements. The virtual meetings, held in response to COVID-19 pandemic meeting restrictions, offered closed captioning and Spanish interpretation. Virtual meetings were recorded through an online webconferencing platform and posted on the project website.

Briefings. The East-West Study team also briefed members of the legislature, interested stakeholders, and Regional Planning Agencies on the Study.

- Legislative briefings were held in October 2018, July 2019, and October 2020
- Regional Planning Agency presentations and discussions took place in October 2018, July 2019, February 2020, and September 2020
- Study team members responded to requests for information throughout the study process and prepared technical memos

Website and Communication Materials. MassDOT created the East-West Passenger Rail Study [website](#) to define the Study, post meeting minutes and presentations, and invite stakeholders to sign up for email posts on the project or send questions to the project team. All of the Study presentations are posted on the site, as well as the project fact sheet in English and Spanish, upcoming events and additional resources. The [fact sheet](#) provided detailed information about the Study schedule, corridor, alternatives development and analysis. Stakeholders and interested parties were invited to sign up for project updates, meeting notices and meeting summaries. As of September 2020, there were 1,270 subscribers. Advisory Committee members and the public frequently provided comments, questions and preferences through the website contact information.

Civic Engagement Input. Throughout the study process, Advisory Committee members, Corridor residents, and study stakeholders have articulated a strong desire for better connections between western, central, and eastern Massachusetts. Advisory Committee members and other stakeholders have provided input on anticipated benefits from an East – West Passenger Rail service for residents and businesses throughout the corridor, including:

- Western Massachusetts – Provide passenger rail connections to opportunities in central and eastern Massachusetts, including jobs, recreational opportunities, and important regional assets like Logan Airport, Boston's hospital and healthcare cluster, educational institutions, and entertainment/recreational destinations such as Fenway Park and the TD Garden
- Eastern Massachusetts – By providing more frequent and reliable rail service, enable workers with jobs in eastern Massachusetts to have access to less expensive housing in central and western Massachusetts, while providing employers with access to a larger pool of potential employees
- Full Corridor – Divert automobile trips from I-90 and provide congestion-relief benefits while reducing climate and air quality impacts

These priorities from the Advisory Committee and the study's Civic Engagement process, combined with the study's rationale and goals, guided the evaluation of Existing Conditions discussed in Chapter 3, as well as the development and evaluation of improvement alternatives discussed in Chapter 4. Key findings from the study's alternatives analysis are detailed in Chapter 5, and in consideration of input from the study's public engagement process, MassDOT's Next Steps and Recommendations are included in Chapter 6.

3. Existing Conditions

Passenger travel in the East – West Corridor is primarily dependent upon the Massachusetts Turnpike / Interstate 90 (I-90), which is depicted in red in Figure 3-1 on the next page, the connecting highways and adjacent roadway networks. The vast majority of passenger trips in the Corridor are completed by private passenger car, some intercity bus travel (green), and Massachusetts Bay Transportation Authority (MBTA) commuter rail between Worcester and Boston as shown in Section 3.3, Travel Patterns.

3.1. Existing Passenger Railroad Service

Passenger rail travel in the East – West Corridor is provided by frequent Commuter Rail service on the MBTA's Framingham/Worcester Line (purple) between Worcester and Boston. However, west of Worcester, passenger rail service in the Corridor is provided only by Amtrak's once-a-day Lake Shore Limited (blue) between Chicago and Boston. Within the East – West Corridor, the Lake Shore Limited provides service to Pittsfield, Springfield, Worcester, Framingham, and Boston.

Prior to 2004, passenger rail service between Springfield and Boston was also available via the "Inland Route," which was a branch of Amtrak's Boston – New York- Washington Regional Service. Prior to 2004, passenger rail service between Boston and New York City was provided via two branches – the Shore Line and the Inland Route – which diverged in New Haven. The Shore Line runs eastward from New Haven along the Connecticut coastline, before turning northward in southern Rhode Island and passing through Providence and southern Massachusetts en route to Boston. The Inland Route turned north from New Haven to Hartford and Springfield, then continued eastward to

Boston via the Boston – Albany railroad mainline.

The Shore Line accommodates Amtrak's Northeast Corridor (NEC) Acela and Regional Service trains. Prior to 2000, the Shore Line operated with diesel-powered trains between Boston and New Haven, with full electric service continuing west to New York. In 2000, the electrification of the Shore Line between New Haven and Boston was completed, and thereafter the entire Shore Line was operated exclusively by electric power. The electrification of the Shore Line had multiple benefits: it enabled the operation of Amtrak's new all-electric Acela Express trains and faster Regional Service trains; it eliminated the need for switching locomotives in New Haven, a time-consuming and disruptive operation; and it eliminated diesel emissions and local pollution impacts.

The Inland Route traveled northward from New Haven through central Connecticut and western Massachusetts, passing through Hartford and Springfield, then turned eastward and through Worcester and Framingham en route to South Station. With the electrification of the Shore Line in 2000, Springfield – Boston service along the slower Inland Route (2:05 hours longer from Boston – New York City) was gradually reduced, with the last train discontinued in 2004.

The New Haven-Springfield portion of the Inland Route currently features passenger service via Amtrak's Northeast Regional service and the Vermonter between Springfield and Washington, DC, as well as a total of 16 weekday round trips on Amtrak shuttle and CTail Hartford Line trains between New Haven and Hartford or Springfield. The only passenger rail service on the east-west portion of the Inland Route between Springfield and Boston is Amtrak's Lake Shore Limited operating between Boston and Chicago, which, prior to the COVID-19 pandemic, provided one train per day in each direction.



Although Amtrak has not operated passenger service between New Haven and Boston via the Inland Route since 2004, the corridor can provide redundancy in the event of an emergency or major construction along the NEC. When NEC service was completely suspended during the replacement of the Thames River Bridge in 2008, Amtrak provided reduced service levels between Boston and New York City by operating three round trips per day along the Inland Route.

3.2. Railroad Operating and Regulatory Issues

The railroad network in Massachusetts has a mix of ownership, both public and private. The rail lines that are owned publicly by the MBTA and MassDOT are used primarily for passenger commuter rail and intercity rail operations, but freight railroads also have a "right of access" to operate over these lines to serve their customers. These rights of access are a function of freight railroads' Common Carrier obligations, as initially defined through the Interstate Commerce Act of 1887, subject to operational coordination with the rail owner. Conversely, passenger railroads can gain operating rights over freight railroads, subject to coordination and operating agreements; for example, Amtrak has operating rights over the CSX-owned Boston – Albany main line to operate the Lake Shore Limited.

The Rail Passenger Service Act of 1970 created the National Railroad Passenger Corporation (known as "Amtrak") to provide nationwide passenger rail service. This law provided Amtrak with rights of access to operate over freight lines, and established a "Basic System Plan" of defined routes that required freight railroads to maintain these routes to prescribe a "Level of Utility". All other routes not included in Basic System Plan are subject to separate agreements to establish speed and maintenance standards.

Passenger and Freight Shared Use Operations

Passenger and freight shared-use rail operations create challenges for scheduling, dispatch, and the need for suitable track infrastructure and signal equipment. Shared use operations that add passenger service to freight rail lines often require investment to install some combination of double-tracking, passing sidings, new track, and higher-capacity signal systems.

Passenger trains operate at higher speeds, which requires the track structure, signal system, and roadway crossing infrastructure be designed and maintained to support faster operations. The Federal Railroad Administration (FRA) has established maintenance standards and other speed-related regulatory requirements that railroads must comply with, or the passenger service must be curtailed or reduced to operate at a much slower speed. The frequency and comprehensiveness of inspections of the infrastructure is also proportionate to the maximum speed in the territory. Both the additional maintenance efforts and more intensive inspections are intrinsic to operating the trains at higher speeds. The costs of these additional activities must be accounted for in the development of the passenger service plans.

A shared-use operation complicates line capacity utilization, particularly with intercity passenger trains involved. Typically, average intercity passenger train speeds considerably exceed freight train average speeds, which causes "overtake" conflicts and exacerbates the difficulty in prioritizing passenger operations without causing adverse impacts to freight service. In Massachusetts, current and approved shared use corridors provide enough capacity for near-term needs. It is important that any future shared use of these corridors conforms to the principle of providing sufficient capacity.

Passenger Train Classes

Passenger rail service can generally be classified as either commuter rail or intercity passenger rail, which in turn has different levels of service. All of these types of service can be found in the East – West study corridor, although high-speed intercity service operates only peripherally in the corridor.

- **Commuter Rail:** Commuter rail service is a more frequent type of service that connects many urban and suburban stations to a large city center, with a range that corresponds to the size of the central city. As the name implies, a high proportion of riders are typically commuting daily to jobs in the city center. The MBTA operates commuter rail service on the Worcester/Framingham line between Worcester Union Station and Boston South Station. This service operates with high frequency, station stops 1 to 5 miles apart, and maximum runs of 30 to 45 miles and maximum speeds of 80 mph. The CTraill/Hartford Line is also commuter rail service. Commuter rail services typically receive public financial support to offset from 25% to 75% of the service's operating costs.
- **Intercity Passenger Rail:** Intercity passenger rail provides connections among different urban centers, with longer distances between stops and lower frequency than commuter rail. Amtrak is the principal national operator of intercity passenger rail in America, though there are some state and public authorities that also directly operate or manage operation of the regional intercity services.
 - High-Speed Intercity Service, such as the Amtrak Acela, operates with frequent service, station stops 30 to 50 miles apart, a maximum line distance of 500 miles, and a top speed of 160 mph. The highest portion of travel is business travel. This type of service only briefly shares tracks with the East – West Corridor between Back Bay Station and South Station in Boston.

- **Regional Intercity Service** operates with moderate frequency, station stops 10 to 50 miles apart, maximum runs of 700 miles, and a maximum speed of 125 mph. A high proportion of trips are for business and personal/recreational travel. Of the rail services in the East – West corridor, only the Washington, DC to St. Albans, VT Vermonter service and 9 Regional Service round trips serving Back Bay and South Station are regional intercity service. A new East-West service would also fall within this category, as would the Boston North Station–Portland–Brunswick, ME *Downeaster* service discussed in this study.
- **Long-Distance Intercity Service** operates less frequently (with only one or a few daily trips, station stops 15-75 miles apart, and maximum runs of 2,800 miles and maximum speeds up to 110 mph. A high proportion of passengers use these services for personal/recreational travel. The Amtrak Lake Shore Limited is an example of a long-distance intercity service.

Passenger Service Funding

As previously noted, the Rail Passenger Service Act of 1970 created Amtrak to provide nationwide passenger rail service. Amtrak receives Congressional funding for some capital and operating costs, but it is also responsible for covering costs through passenger fares. As part of Amtrak's legislatively-defined Long-Distance system, the Lake Shore Limited operating expenses are absorbed by Amtrak, whereas both the Vermonter and Amtrak-operated trains on the Hartford Line and the Valley Flyer service are classified as "state-supported." These services receive financial assistance from the states along their respective routes.

Railroad Infrastructure

The following are definitions of a few specialized railroad infrastructure terms that are used in the following sections.

- **Railroad Bridges.** Railroad bridges are a critical component of rail infrastructure that separate railroad operations from conflicts with obstacles such as water bodies or other transportation links, such as roadways or other railroads. The relative vertical position of railroad bridges is also categorized as "undergrade" or "overhead" from the perspective of the train.
 - Undergrade bridge. The railroad passes over an obstacle, such as a roadway or water body.
 - Overhead bridge. The railroad passes underneath a bridge, such as a roadway viaduct.
- **Grade Crossing.** A railroad grade crossing is a location where a railroad and a roadway intersection "at-grade," that is, at the same level. Grade crossings, both for public and private roadways, can affect the safety and efficiency of freight and passenger rail service. Warning devices are employed at many at-grade crossings to identify the presence of the grade crossing. This equipment may include passive signage such as crossing crossbucks, or active systems, such as flashing lights and auditory signals, as well as active barrier, gates that are lowered when a train is approaching. New installations can now include vehicular and pedestrian intrusion warning systems.
- **Interlocking.** An interlocking is a system of railroad infrastructure, such as a junction or crossing, along with associated signals and switches, that enable trains to change tracks or cross other railroad tracks in a manner that is controlled and safe. PTC provisions have added additional safety elements to control these movements.

3.3. East – West Corridor Transportation System

The following is a summary of the key elements of the transportation system that serves the East – West Corridor, with a particular focus on the rail line connecting the East – West Corridor communities.

Pittsfield – Boston Rail Line. The East – West Rail Corridor between Pittsfield and Boston is served by CSX Transportation (CSX), the MBTA Commuter Rail Framingham/Worcester Line, and Amtrak. This section identifies all major physical, regulatory, and ownership opportunities and constraints, as well as recent changes, along the Corridor. The key metrics for the Corridor are divided among the Corridor's three main segments: the CSX-owned track from Pittsfield to Springfield and from Springfield to Worcester, and the MassDOT-owned segment between Worcester and Boston.

- **Rail Line Ownership and Control.** CSX is the largest freight railroad operating in Massachusetts and the largest private owner of rail property; CSX owns the segment of the East – West Rail Corridor between Pittsfield and Worcester. A 2012 agreement transferred ownership and control of the balance of the corridor, from Worcester to South Station in Boston, from CSX to the Commonwealth of Massachusetts. As part of the agreement, MassDOT and CSX collaborated on track and bridge improvements to provide full double-stack vertical clearance (Plate H, 20' 2") between the New York State line and a newly-expanded intermodal terminal in Worcester, reducing transit times by as much as 24 hours. In addition to the mainline improvements, CSX has made an investment of over \$100 million in intermodal facilities in Worcester, West Springfield, and Westborough that greatly benefit the Massachusetts economy. These investments have expanded intermodal rail access to Massachusetts for freight shippers, improving the competitiveness of freight rail in the Commonwealth. CSX continues to provide local freight service to Boston, and through Mansfield to South Coast destinations. The 2012 ownership transfer of the Worcester – Boston section to MassDOT enabled a large-scale expansion of MBTA service as well as expansion of the infrastructure such as the 3rd Main Track project and Allston

(Beacon Park) re-development.

- **Track and Right-of-Way Conditions.** Between Pittsfield and Boston, the East-West Corridor spans 151 miles. In general, the width of the railroad right-of-way decreases as one moves from west to east; the western segment is up to 150 feet wide, while the heavily-developed eastern segment can be as narrow as 50 feet, as shown in Table 3-1. At one time the line had two or more main tracks for the entire length. Western sections were single-tracked in the 1980s to help reduce the costs of replacing an obsolete signal system and rail infrastructure. The line is currently considered to be well-maintained by CSX and is the only route east of the Hudson River capable of hosting 315,000-lb. freight cars, the heaviest in general use in the industry.

Table 3-1 – Track and ROW Conditions by Major Segment

SEGMENT	CORRIDOR WIDTH (FT)	SEGMENT LENGTH (MI)	DOUBLE-TRACKED (MI)	PASSENGER SPEEDS (MPH)	PERCENT AT MAX SPEED
PIT – SPG	100-150	52	38.5	30-50	47%
SPG – WOR	80-100	54	21	25-60	45%
WOR – BOS	50-80	44	44	25-79	11%

- Maximum authorized and average passenger speeds decrease as one moves east to west due to sharp track curvature and the difficult topography of the Berkshires and its river valleys.
- The Pittsfield to Springfield section offers the widest right-of-way (ROW), but passage alongside the Westfield River, declared a part of the National Wild and Scenic River System, effectively prevents utilizing much of it. Maximum and average passenger speeds along the Springfield to Worcester segment are higher, but still constrained by engineering maintenance criteria to support the very heavy freight volumes, as well

as sharp curvature just west of Worcester in Leicester and Charlton.

- The central section of the corridor historically featured two or more tracks and typically offers 80 to 100 feet of width, with occasional segments between 100 and 150 feet wide.
- The highest maximum and average passenger speeds are attained along the passenger-heavy, fully double-tracked, less curving segment between Worcester and Boston, which permits passenger trains to travel up to 79 mph in sections. Most of the railroad alignment east of Worcester has right-of-way between only 50 and 80 feet wide.

- **Geometric Challenges and Operational Obstacles.** The topography of the terrain surrounding the rail alignment shapes the railroad geometry, which has a major influence on train speed. In addition to potential geometric issues, the presence of bridges and interlockings requiring diverging operations can also affect the ultimate performance and/or deliverability of a potential passenger service. Depending on the maximum operating speed desired, the presence of sharp horizontal curves (i.e., those greater than 2 degrees 30 minutes) may serve to limit the maximum speeds that can safely be achieved. Similarly, steep slopes in either direction (absolute vertical grades of one percent or greater) can negatively impact the potential speed of rail operations, especially freight operations. These constraints ultimately determine the rail corridor's horizontal and vertical alignments and can make it economically difficult to significantly increase maximum speeds.
- As seen in Table 3-2 on the next page, the Pittsfield to Springfield segment has the highest density of sharp horizontal curves. These curves are to traverse the significant grades formed by the Berkshire Mountains, which carry the railroad alignment to a maximum elevation of 1,460 ft. above sea level in the Town of Washington. The curves enable the railroad

alignment to follow lower grades that cannot be achieved by only following a straight track alignment. Multiple sharp curves cannot be avoided in this segment. Notably, the railroad alignment crosses the Westfield River 22 times in this section to maintain reasonable grades.

- From Springfield to Worcester, the Corridor is more level and features fewer horizontal curves less than five degrees; most of those sharp turns are located in Charlton or Spencer. In this section of the corridor, there are nine major bridges over the Quaboag River and several smaller bridges over other waterways.
- The Worcester to Boston segment is comparatively straight and unimpeded, with only five bridges over the Charles River, Muddy River, and Sudbury River.

Table 3-2 – Geometric Challenges and Obstacles by Major Segment

SEGMENT	SHARP CURVES (> 2°30')	STEEP SLOPES (> 1%)	BRIDGES (UNDERGRADE / OVERHEAD)	INTER- LOCKINGS
PIT – SPG	59	6	67 (50 / 17)	9
SPG – WOR	20	1	84 (50 / 34)	14
WOR – BOS	21	0	100 (27 / 73)	16

- **Grade Crossings.** Railroad grade crossings are critical to the safety of the rail line and the roadways that cross it. The fewer grade crossings, and the greater the level of protection at the grade crossings that do exist, the lower the risk of collisions. Grade crossings by type along each of the three major Boston – Albany mainline rail segments are shown in Table 3-3.

² Association of American Railroads, "Freight Rail & Preserving the Environment," July 2020.

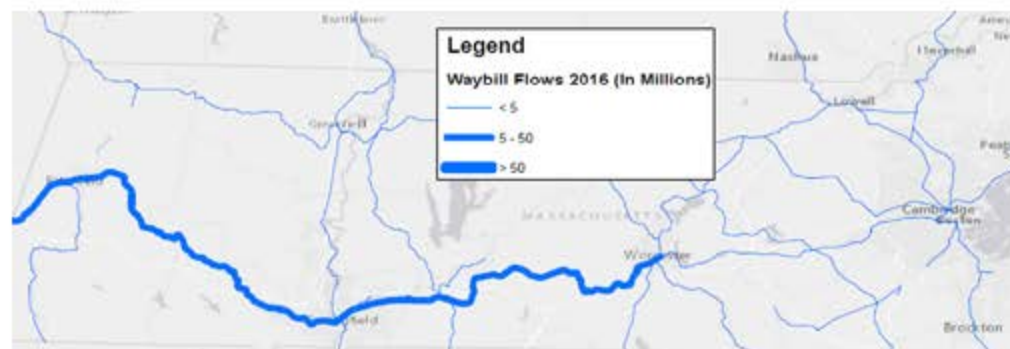
Table 3-3 – At-Grade Crossings by Major Segment and Type

SEGMENT	PUBLIC	PRIVATE	PEDESTRIAN	TOTAL
PIT – SPG	5	15	1	21
SPG – WOR	0	7	0	7
WOR – BOS	4	1	5	10
TOTAL	9	23	6	38

- **Passenger Rail Capacity and Demand.** The MBTA operates 27 weekday round trips on the Framingham / Worcester Commuter Rail Line, with 20 of those round trips providing service west of Framingham to the western terminus at Worcester Union Station, while Amtrak operates one 1 daily round trip between Boston and Albany / Chicago. East of Worcester, the MBTA's preliminary analysis of capacity along the Worcester Line indicates that any increase in peak service would require implementing the Worcester Triple Tracking project described in Chapter 2. At the line's eastern terminus, South Station is already at capacity during peak hour service and will remain heavily constrained until the South Station Expansion project is implemented. In addition to expanding terminal capacity to meet future high-speed, intercity, and commuter rail service needs, this effort would also increase layover capacity on the eastern end.
- **Freight Rail Capacity and Demand.** Shipping freight by rail rather than by truck reduces truck traffic and highway congestion, reduces greenhouse gas emissions by an estimated 75 percent², and provides an additional shipping option for Massachusetts businesses. The segment of the Boston Main Line between Pittsfield and Worcester constitutes a core route for CSX's system freight movements, and freight rail demand in the corridor is likely to increase, consistent with projections that overall freight

movement in Massachusetts is expected to increase by 31 percent between 2013 and 2040.³ The CSX freight line is one of the few freight railroad lines in Massachusetts that can handle the current freight rail industry standard of 286,000 lb. railcars, and the only one capable of handling 315,000 lb. railcars. In 2018, CSX regularly operated 14 through freight trains each day, along with additional freight trains based on shipper demand and locals. CSX has handled approximately 140,000 freight loads per year in the Worcester intermodal facility, either originating from or destined to Commonwealth customers. Waybill sample data for 2016 confirms that the CSX mainline between the New York State line and Worcester carries by far the most tonnage of any rail line in Massachusetts and within New England, as shown in Figure 3-2.

Figure 3-2 – 2016 Freight Rail Volumes (FRA Waybill Sample Data)



- **Positive Train Control (PTC).** PTC is a rail safety overlay system that works with on-board train control and railroad signal and communication systems to prevent trains from colliding, operating at excessive speeds through curves, and provide worker protection when track construction or maintenance is underway. PTC provides additional operational safety features and only moderately changes

the design, operational speed, or capacity of the existing system. CSX and the MBTA have implemented two different PTC systems for their respective areas of jurisdiction; CSX has implemented the Interoperable Electronic Train Management System (I-ETMS) between Pittsfield and Worcester, while the MBTA uses the Advanced Civil Speed Enforcement System (ACSES) between Worcester and Boston. CSX, the MBTA, and Amtrak have completed implementation of the infrastructure and operating systems required for PTC, and expect their systems to be fully operational by the end of 2020. For any trains operating in both CSX and MBTA jurisdictions, the locomotive will need both systems to safely operate. This includes both passenger trains operating west of Worcester and freight trains operating east of Worcester.

- **Passenger Rail Stations.** The large cities on the East – West Rail Corridor – Pittsfield, Springfield, Worcester, and Boston (3 stops) – currently have passenger rail stations that could be served by East – West trains, although some would require improvements. Two other potential station locations, Chester and Palmer, had train stations along the rail line in the past, but those are no longer extant and would require new stations. Amtrak's long-distance Lake Shore Limited intercity service between Boston and Chicago has stops in Pittsfield, Springfield, Worcester, Framingham, and Boston. Additional stations along the Worcester to Boston segment are used by MBTA, with local and express commuter rail service between those cities and numerous intermediate points. South Station and Worcester Station are the terminal stations of the segment, and the terminal stations for current MBTA commuter rail service. Table 3-4 on page 21 provides key information for each of these stations related to platforms, ownership of the various elements, on-site parking capacity, ADA accessibility,

³ Freight Analysis Framework (Bureau of Transportation Statistics/ Federal Highway Administration), per 2018 Massachusetts State Rail Plan.

and connections to other public transportation services. These represent current conditions, and do not necessarily reflect future conditions that would be in place when an East – West passenger rail service could be in operation.

- o **Joseph Scelsi Intermodal Transportation Center (ITC)**

is a transportation facility located in downtown Pittsfield, Massachusetts. The ITC is served by Amtrak's Lake Shore Limited service and is owned and managed by the Berkshire Regional Transit Authority (BRTA). The ITC provides a waiting area for passengers who then descend to track level to board their trains. There is a one low-level side platform facing one of the line's two tracks. Accessible platforming is provided by wheelchair lift. Amtrak does not provide ticketing or baggage service at the station. The ITC is also served by Greyhound and Peter Pan intercity buses and local BRTA buses. Parking is available at a 132-space parking lot.

- o **Chester** has a former station building located on Prospect Street in the town center, but there is currently no active station facility and no passenger rail service. The historic station building now houses the Chester Railway Museum, which is owned and managed by the Chester Foundation Inc. Two CSX-owned railroad tracks pass to the west of the historic station building; there are no remaining platforms at the site.

- o **Springfield Union Station**, in downtown Springfield, is served by Amtrak's Lake Shore Limited, Vermonter, New Haven to Springfield Shuttle, and limited Regional Service trains as well as the CTail Hartford Line commuter service. The station is owned and managed by the Springfield Redevelopment Authority. The station has four low-level platforms that are accessible by wheelchair lift and a new high-level boarding platform, which opened in early 2020, that provides a fully ADA-compliant platform.

The City of Springfield demolished the large, abandoned baggage/station building on the north end of the site, and in 2017 completed the construction of a large parking garage with 377 parking spaces and a 24-bay bus terminal on the site. The station is served by Greyhound and Peter Pan intercity buses and PVRTA local buses.

- o **Palmer** historically had a station located in the town center east of the intersection of the CSX and NECR mainlines. The station was abandoned and the old station building now functions as a restaurant. Three tracks are located to the north and one to the west of the historic station. Currently there is no active station facility, and the location is not served by passenger rail service. The Amtrak Lake Shore Limited service passes through Palmer but does not stop. The station site is located on right-of-way owned by CSX. There is also an important interlocking which has its switching and signal facilities within the Palmer station site. This arrangement did not exist when the station was originally constructed and would substantively complicate the siting of a new station in the same location.

- o **Worcester Union Station** is a passenger rail station located in downtown Worcester at Washington Square. The station is served by MBTA's Framingham/Worcester Commuter Rail Line and Amtrak's Lake Shore Limited service. The station is owned and managed by the Worcester Redevelopment Authority. The station features a high-level platform on one side, which is ADA-compliant, large headhouse with passenger waiting and ticketing areas, retail and food vendors, and public safety facilities. A central high-level boarding platform is currently in design to further improve the ADA accessibility requirements and to improve the operational capabilities. The station has a 500-car garage. The station is also served by Greyhound and

Table 3-4 – Passenger Rail Stations: Boston to Pittsfield

COMPONENT / STATION	PITTSFIELD	CHESTER	SPRINGFIELD	PALMER	WORCESTER	FRAMINGHAM	BACK BAY	SOUTH STATION
PLATFORM TYPE	Low level	N/A	Low level	N/A	High Level (1 side)	Low and Mini High Level	High Level	High Level
OWNERSHIP								
FACILITY	BRTA	N/A	Amtrak	N/A	WRA	MBTA	MBTA	MBTA
PLATFORM	BRTA	N/A	Amtrak, CSX	N/A	WRA	MBTA	MBTA	MBTA
TRACK	CSX	CSX	Amtrak, CSX	Amtrak, CSX	WRA	MBTA	MBTA	MBTA
PARKING	City of Pittsfield	None	Springfield Redevelopment Authority	N/A	City of Worcester	MBTA	N/A	N/A
PARKING	132	N/A	377	N/A	500	166	None	226
ACCESSIBILITY	Platform, wheelchair lift	N/A	Platform, restrooms, waiting room, wheelchair lift	N/A	Platform, restrooms, waiting room	Platform	Platform, restrooms, waiting room	Platform, restrooms, waiting room, ticket office
CONNECTIONS	BRTA and intercity bus	N/A	CTrail Hartford Line, Vermonter, NE Regional, PVTABus, intercity bus	N/A	MBTA commuter rail, WRTA bus, and intercity bus	MBTA commuter rail, and MWRTA bus	MBTA subway/bus/commuter rail	MBTA subway/commuter rail, and intercity bus

Peter Pan intercity buses, Worcester Regional Transit Authority local buses, and shuttles affiliated with nearby institutions.

- **Framingham Station** is a passenger rail station located at the intersection of Irving and Concord Streets in Framingham, Massachusetts. The station is served by MBTA's Framingham/Worcester Commuter Rail Line and Amtrak's Lake Shore Limited, and is owned and managed by the MBTA. Framingham Station has two low-level, at-grade platforms, with access from various points on surrounding streets, and a

mini-high platform for each of the two tracks. The station meets ADA accessibility requirements. The station has a 166-space parking lot and connections with local bus service and shuttles.

- **Back Bay Station**, in the Back Bay neighborhood of Boston, is served by three Amtrak services and four MBTA commuter rail routes. The station is owned and operated by MBTA. Back Bay Station has five rail tracks and three platforms used by Amtrak and MBTA Commuter Rail trains. Additionally, the MBTA Orange Line rapid transit service has two tracks and one

center island platform. Local buses utilize a bus loop located on the eastern side of the station. Private shuttle buses also serve the station. The station is ADA compliant, with fully accessible platforms and trains.

- o **South Station** in downtown Boston is the largest passenger rail station in New England, serving three Amtrak services, eight MBTA Commuter Rail routes, and the seasonal CapeFlyer passenger rail service to Cape Cod. The MBTA owns and maintains the transportation facilities at South Station; Beacon Management owns and operates office space at the station. The station has thirteen tracks and seven platforms, passenger waiting and ticketing facilities, retail and food vendors, and public safety facilities. It is also a major intermodal hub, with connections to the Red Line and Silver Line rapid transit lines, local bus routes, private shuttle bus routes, and intercity bus lines. In 2012, South Station served roughly 128,000 daily boardings and alightings, including Amtrak, MBTA Commuter Rail, Red Line, Silver Line, local bus, and intercity bus passengers. The station meets ADA accessibility requirements, with fully accessible, level-boarding platforms and elevators. Parking is available at the South Station Bus Terminal garage, located over the southern part of the site. The South Station rail terminal currently operates at capacity during peak hours, and the South Station Expansion project is required to accommodate additional passenger rail service.
- **Environmental and Regulatory Constraints.** Historic railroads running through hilly or mountainous terrain frequently follow river valleys to maintain their grade where possible. In the East-West Corridor, much of the Boston-Albany mainline follows such river valleys. Between Pittsfield and Springfield, much of the alignment follows the Westfield River, which is afforded special protections under the National Wild & Scenic Rivers System program; east of Springfield, it follows the Quaboag River. Major changes or upgrades along the Corridor would have impacts to these protected resources, as well as the adjacent communities. Thus, rail corridor improvements for the East-West Passenger Rail service would require regulatory review and permitting at the federal, state, and local level, particularly for work outside of the immediate railroad right-of-way. Given the length of the Corridor, increasing passenger rail speeds would likely to require infrastructure improvements that would trigger a NEPA filing beyond a Categorical Exclusion, along with various state and local permits.
- **Operating Rights and Contractual Restrictions.** Much of the freight rail system operates on legacy corridors that are shared by commuter and/or intercity rail passenger rail service for at least a portion of the route. Shared-use rail operations create challenges for operational capacity; scheduling and dispatch; the need for suitable track infrastructure (e.g. double-track and passing sidings) and signal equipment; and speed mismatches between slower freight trains and faster passenger trains. The principal conflict with shared corridors comes when the combined use by passenger and freight rail operators exceeds line capacity, including any capacity the freight railroad has reserved that is necessary for it to achieve its growth plans. Nevertheless, under federal law, Amtrak has the right to provide passenger service on freight-owned lines, while the host railroad has the right to set the terms for an operating agreement. The MBTA and MassDOT are not eligible to directly utilize these legal provisions.

Highway Network. The main highway connection for the East – West Corridor is the I-90 corridor / Massachusetts Turnpike. This express highway runs principally east – west across Massachusetts and provides access to all the Corridor communities, either directly or via a connecting highway.

As shown in Figure 3-3, automobile volumes along I-90 increase as one moves eastward towards Boston. Beginning near Pittsfield and Lee, directional Annual Average Daily Traffic (AADT) volumes increase around Springfield, abruptly rise at the I-290/395 exit in Auburn/ Worcester, gradually increase through the communities of MetroWest, and reach a peak between Route 128 and the interchange serving Allston, Brighton, and Cambridge, beyond which traffic volumes drop off. For Springfield and Worcester, the congested highways connecting the urban centers to I-90 serve more vehicles than I-90 itself.

This building congestion as one moves east on I-90 has significant impacts on travel speeds and reliability of travel times. Based on projections of 2040 travel times from the Massachusetts Statewide Travel Demand Model, the effects of this congestion were assigned a "peak direction travel time factor."

Figure 3-3 – Traffic Volumes (AADT) at I-90 Interchanges (MassDOT, 2018 Road Inventory)

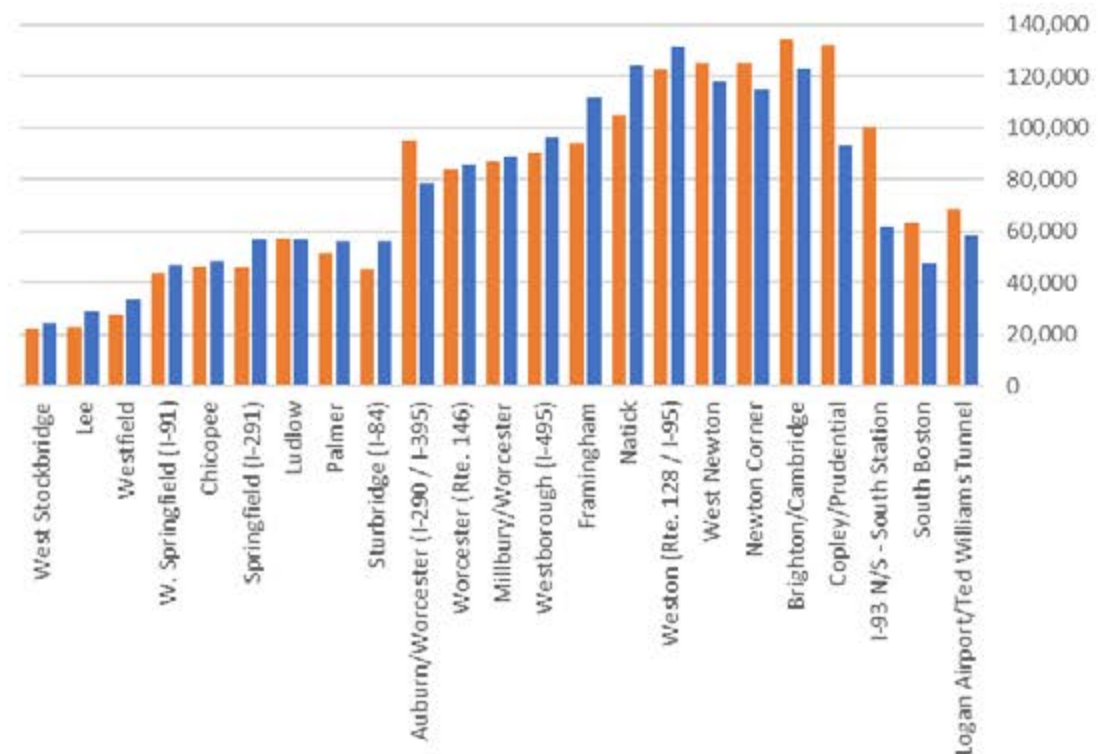


Table 3-5 shows these factors for origin – destination pairs of the major cities in the East – West Corridor.

Table 3-5 – Peak Travel Time Indices (AM or PM Peak / Off-Peak)

ORIGIN (ROWS) / DESTINATION (COLUMNS)	PIT	SPG	WOR	BOS
PIT		1.12	1.45	1.83
SPG	1.13		1.73	2.23
WOR	1.44	1.73		2.47
BOS	1.81	2.19	2.39	

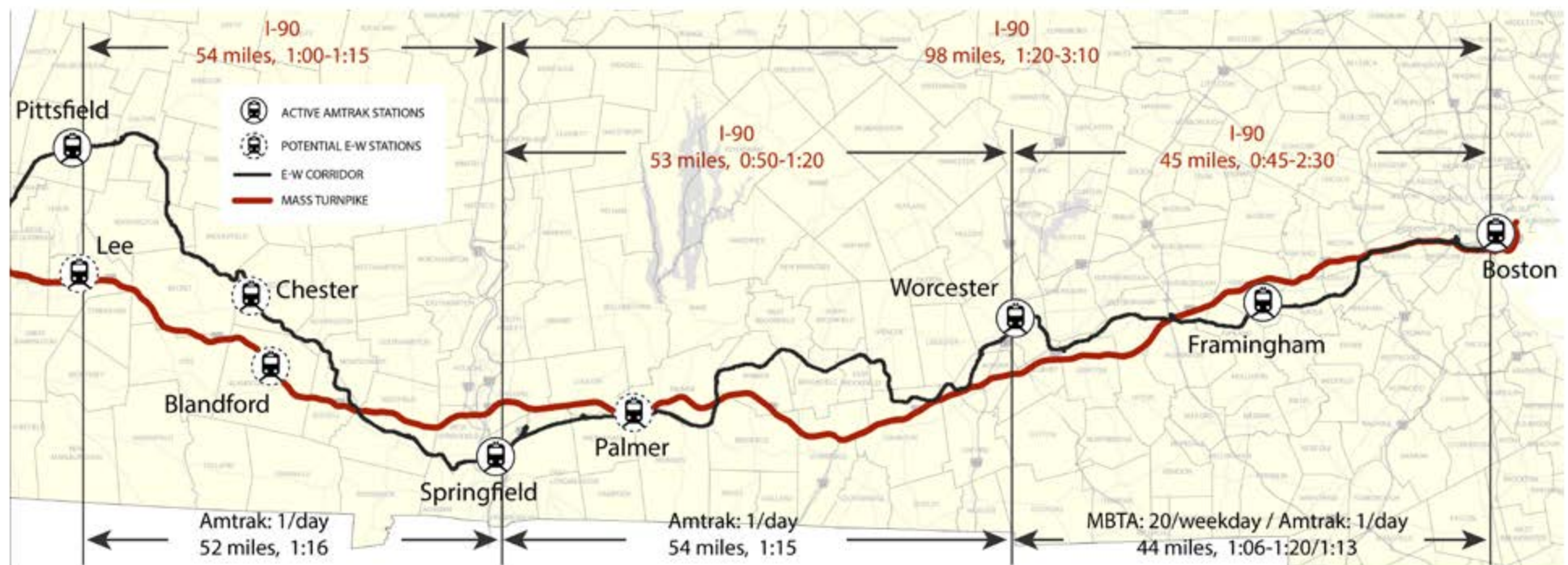
These factors give the average amount by which the travel time for that trip increases during peak period congestion, compared with off-peak, uncongested conditions. For example, in 2040, an automobile trip from Pittsfield to Springfield during the morning peak period (which would be the peak congested direction) is expected to take 1.12 times as long as during uncongested conditions, while the afternoon peak period trip from Boston to Worcester would be 2.39 times as long as an uncongested trip.

These travel time factors are an indicator of congestion levels and auto trip reliability. While auto travel times are relatively unaffected by peak period congestion between Pittsfield and Springfield, significant shifts

in reliability occur for trips with one end located in Worcester or Boston. Figure 3-4 shows typical travel times between the four major markets by automobile and passenger rail.

Bus Service. Daily intercity bus service among the East – West Corridor markets is offered by two private service carriers: Greyhound and Peter Pan. Intercity bus stops are available at each of the rail stations in Pittsfield, Springfield, Worcester, and Boston's South Station. Frequent weekday intercity bus connections are provided between the major markets of Springfield, Worcester, and Boston. However, Pittsfield is served by only two weekday round trips to and from Springfield and

Figure 3-4 – Travel Time Comparison – Passenger Rail versus I-90 Auto Trips



Boston, and only weekday round trips to and from Worcester. While Boston is the dominant market, with 14 weekday round trips to and from Worcester and 11 to and from Springfield, a relatively strong connection is also provided between Springfield and Worcester, with seven eastbound and eight westbound trips each weekday. These services include three eastbound and two westbound express bus trips each weekday between Springfield and Boston. One of the two weekday round trips serving Pittsfield requires a bus-to-bus transfer. Based on the published schedules, intercity bus trips between Pittsfield and Boston take approximately 3:40; however, if customers connect to the Springfield-Boston express service, it can be as short as three hours. Express trips between Springfield and Boston take approximately 1:45, while regular-stop trips take around two hours. Bus trips between Worcester and Boston with local stops can take as long as two hours, but there are many express trips that complete the trip in a single hour. The Pittsfield – Springfield Boston bus route carries approximately 7,800 riders annually, while the Williamstown – Pittsfield – Springfield – Boston route carries approximately 7,100 riders annually;⁴ this corresponds to roughly 50 passengers per day on these bus routes.

3.4. Corridor Demographics

Demographic conditions and trends are critical to defining the mobility needs and opportunities for communities along the East – West Corridor, as well as determining potential ridership for proposed passenger rail services. Many cities and urban centers in Massachusetts are growing rapidly, in particular those located in the eastern part of the Commonwealth. While Boston and its surrounding “inner core”

communities have been experiencing growth, some of the state's historic gateway cities have experienced stagnant or declining population, especially those farther west. Growth or decline in population and employment can be attributed, in part, to access to jobs and economic opportunity, as well as an increasing preference for urban living among some segments of the population. From a travel demand perspective, the population and employment pull due to the Corridor's four major cities (Pittsfield, Springfield, Worcester, and Boston) are orders of magnitude greater than what would be produced or attracted in smaller volume markets like Chester.

This section focuses on population and employment trends recently published by Massachusetts Regional Planning Agencies (RPAs), along with data on Environmental Justice (EJ) communities. EJ communities are those areas where the population has a higher level of low-income, limited English proficiency (LEP), and/or federally-defined minority status for racial and ethnic identity. These populations have long been subject to disproportionate burdens and deficient benefits from public projects and programs. It is therefore essential to track the location of these EJ populations to enable a better understanding of how a project's benefits and burdens affect these populations.

Note: Demographic information is given for Corridor communities based on municipal boundaries, as well as for population within a radius of 20 miles around Corridor stations. This second measure, population within a 20-mile radius of a station, corresponds to the people that are most likely to consider riding the East – West service; it is the population used for the ridership forecasting in the alternatives analysis. It includes the

⁴ MassDOT Rail & Transit Division, *Regional Bus Network Assessment*, 2016.

population of all US Census tracts that have any portion within 20 miles of the train station site.

Population. Based on US Census records, approximately 3.2 million people live within a 20-mile radius of Boston's South Station, which equates to nearly 47 percent of the Commonwealth's total population.⁵ The second and third most populous travel markets in the East – West Corridor are Worcester with 836,000 residents and Springfield with 675,000 residents within a 20-mile radius of those stations. Pittsfield is a substantially smaller market, with just under 129,000 residents within a 20-mile radius. When taken together, Pittsfield and Springfield have a residential population of approximately 803,000 within a 20-mile radius of their respective train stations, which is nearly equal to that for Worcester.

Based on recent municipal-level population forecasts from Massachusetts RPAs, Figure 3-5 on the next page shows estimates of 2020 population and population density, as well as anticipated change from 2020 to 2040. Between 2020 and 2040, population is expected to increase within Boston, which is anticipated to add nearly 115,000 residents through 2040 (16 percent). Steady population growth is also anticipated in Springfield (9,000 total or 6 percent) and Worcester (7,000 or 4 percent), and Pittsfield (3,350 or 7 percent).

Moving from west to east, 2020 population density is moderate in Pittsfield, decreases to the lowest level in the Corridor between Pittsfield and Springfield, then gradual increases to high density in downtown Springfield. Population density decreases between Springfield and

Worcester, where it increases sharply. Population decreases to a moderate level through the MetroWest suburbs, sharply increases around Route 128, then increases significantly to a peak near Boston's South Station.

Employment. Based on the same RPA data and forecasts as those for population, Figure 3-6 on page 28 shows estimates of 2020 employment and employment density, as well as anticipated change from 2020 to 2040. The 2020 job density along the Corridor largely mirrors the pattern found with population density: high or moderate in the cities and lower in areas between the cities, with density increasing from west to east for these respective areas.

By 2040, the greatest increase in employment is anticipated in Boston, with 51,000 new through 2040 (an 8 percent increase). Moderate job growth is projected in Worcester (2,450 jobs or 2 percent) over the 20-year period. However, the MPO forecasts anticipate minor employment decreases in Springfield (-250 jobs or -0.3 percent) and Pittsfield (-900 positions or -4 percent).

⁵ US Census Bureau 2017 American Community Survey 5-Year Estimates at Block Group level.

Figure 3-5 – 2020 and 2040 Population Data (Massachusetts RPAs)

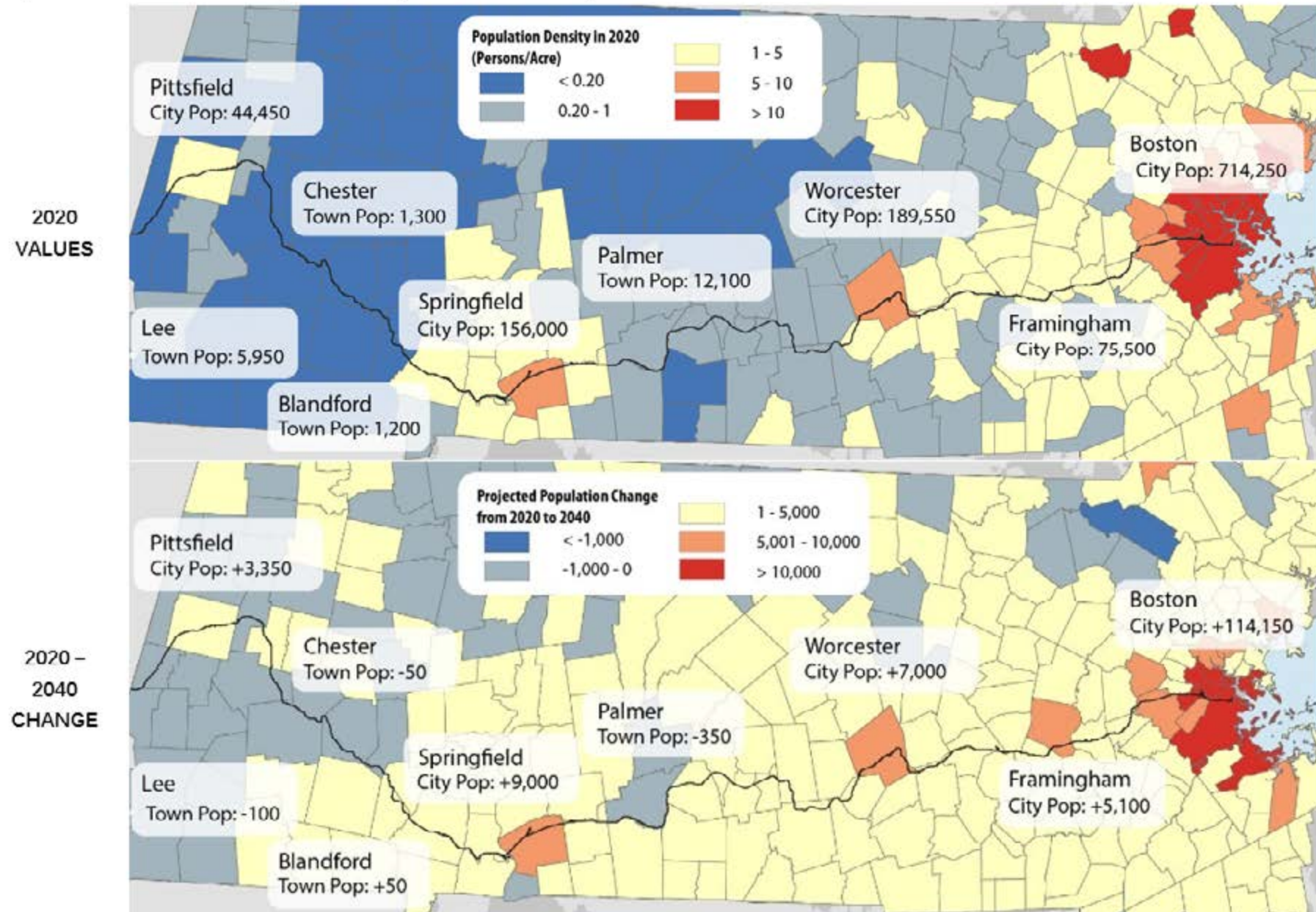
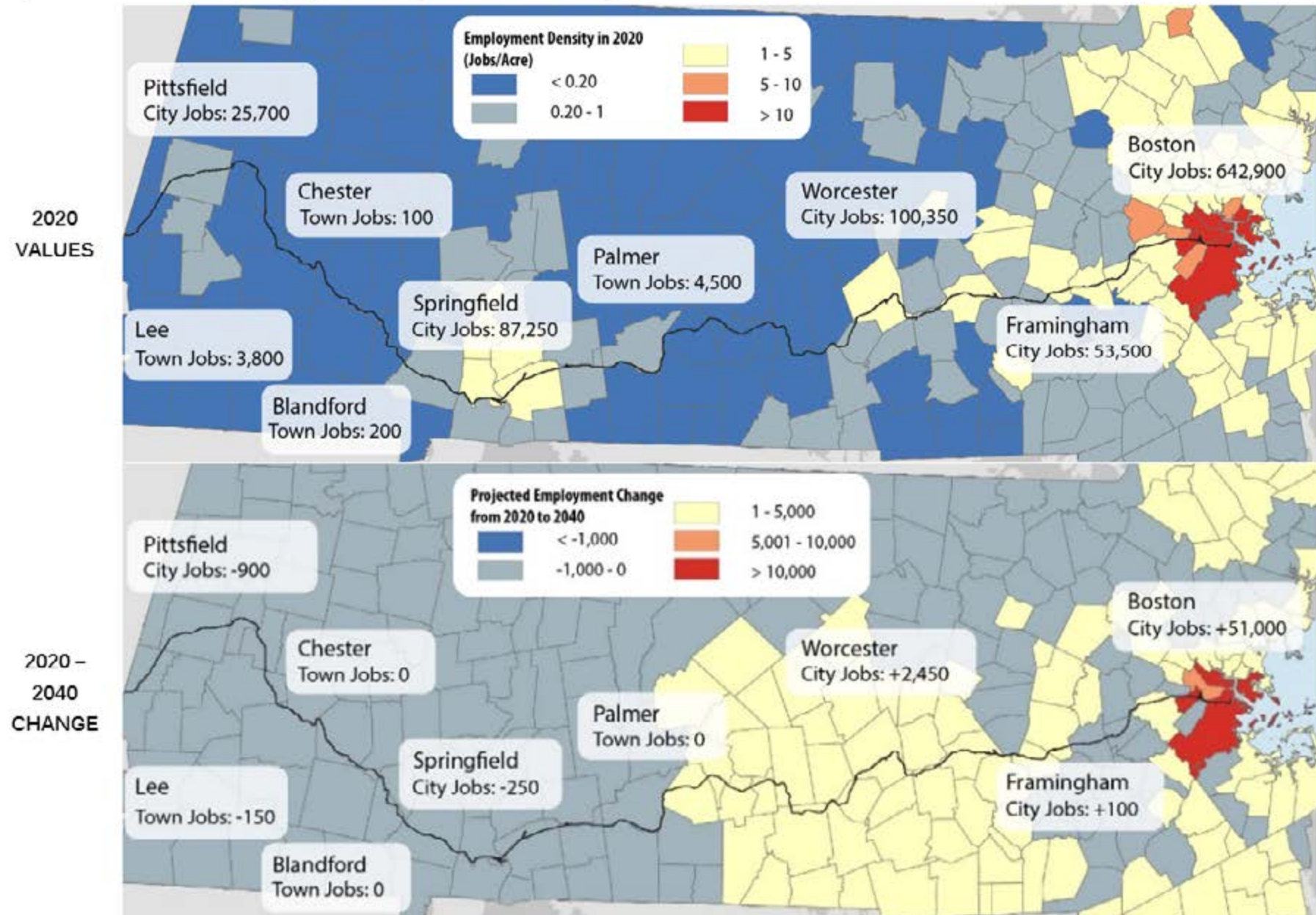


Figure 3-6 – 2020 and 2040 Employment Data (Massachusetts RPAs)



Environmental Justice (EJ) Communities. EJ communities are those geographic areas with a residential population that meets certain thresholds set by the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) relative to income, race and ethnicity, and English-speaking status. Meeting any of the three criteria listed in Table 3-6 qualifies an area as an EJ community. These populations are those most at risk of being denied appropriate benefits or bearing disproportionate burdens from governmental decision-making on policies, programs, and projects.

Table 3-6 – Environmental Justice Community Types and Criteria

COMMUNITY TYPE	EJ CRITERION (≥ 25% OF SEGMENT)
MINORITY STATUS	Residents are minorities (i.e., not White Alone and not Hispanic)
LOW-INCOME	Households have an annual median income ≤ 65% of statewide median
LIMITED ENGLISH PROFICIENCY (LEP)	Residents are experiencing English isolation

When accounting for each of the categories, nearly two out of every five (42 percent) Census tracts within the Commonwealth qualifies as some form of an EJ community. For the Minority Status criterion, Springfield and Boston exceed the average, with over one in two tracts qualifying as an EJ Community, while Worcester was somewhat below the statewide average and Pittsfield well below, as seen in Table 3-7. Springfield has a much higher rate of low-income households than the statewide average, while the other three cities are close to that average. The absence of LEP EJ Communities in Pittsfield resulted in substantially lower proportions of EJ Communities than the statewide average.

Table 3-7 – EJ Community Type Data for Four Major Markets

AREA	MINORITY	INCOME	LEP	EJ
PITTSFIELD	7.7%	28.0%	0.00%	28.0%
SPRINGFIELD	37.8%	34.1%	6.5%	46.6%
WORCESTER	27.3%	15.4%	6.2%	30.9%
BOSTON	41.6%	13.9%	5.9%	42.9%
STATEWIDE	32.1%	17.5%	4.4%	36.9%

3.5. Travel Patterns

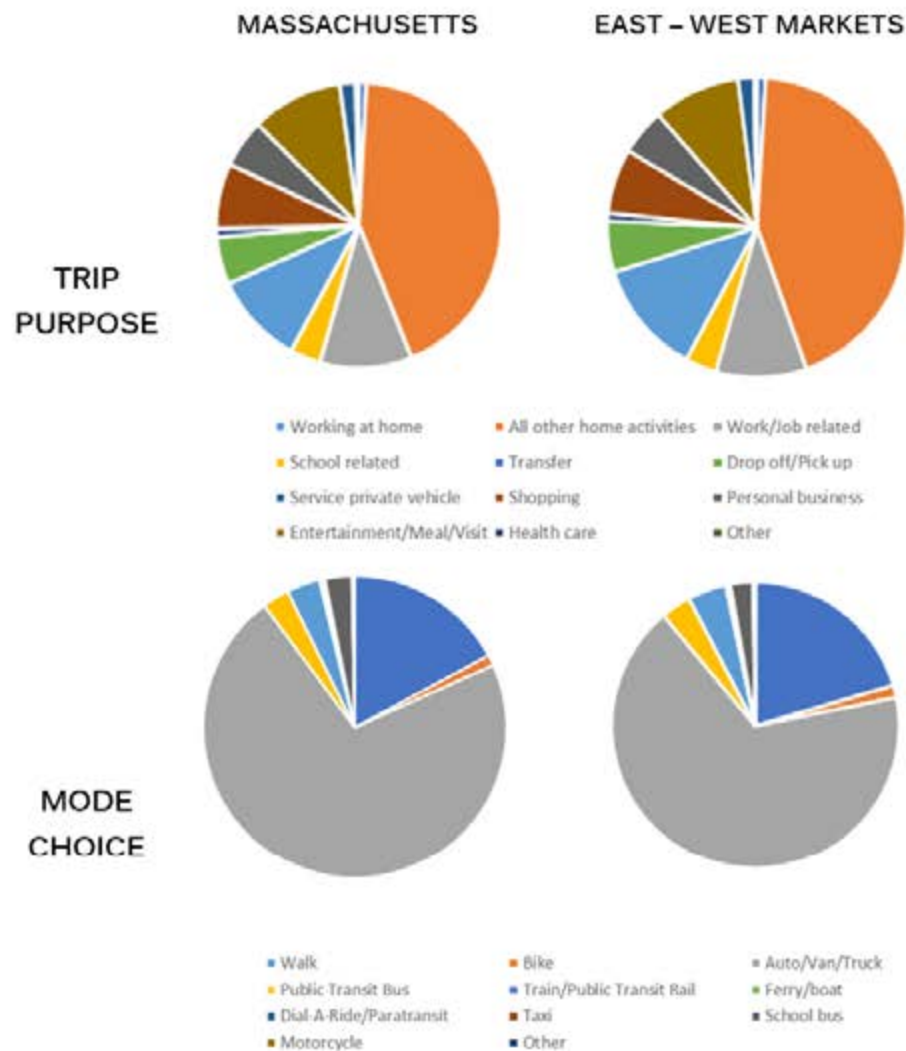
The interaction between the transportation system and demographics shapes the travel behavior and patterns for the Commonwealth and the Corridor markets. These travel patterns in turn are critical to developing and evaluating the potential solutions to the rail passenger travel needs in the Corridor. The following assessment of travel patterns is based on data from the statewide household travel survey and identifies major travel patterns along the Corridor, with a specific focus on existing commuting patterns revealed through US Census observations.

Based on records from the 2010 Massachusetts Statewide Travel Survey, Figure 3-7 on the following page summarizes relevant travel demand data among the Corridor markets, including trip purpose and mode split.

Trip Purpose. Aside from a slightly greater share of Transfer trips (which typically reflect transit users switching vehicles), the trip purpose distributions for journeys taken by residents of the Corridor markets closely track those of all trips in Massachusetts. At both the state and Corridor level, home-based trips accounted for the greatest share of all journeys taken at around 40 percent while work-based trips represented approximately 10 percent. Trips taken for Social/Recreational, Personal

Business, or Shopping purposes typically ranged from 10 to 15 percent of reported journeys.

Figure 3-7 – Trip Purpose and Mode Choice for Trips Among Corridor Markets (2010 Statewide Household Travel Survey)



Mode Split. Residents of the East – West Corridor markets are more likely to travel by modes other than automobile, particularly along the densely developed Worcester-Boston segment. While 70 percent of trips reported in the Commonwealth were completed by automobile, the share of automobile-based trips made by Corridor residents within a 20-mile radius of the train stations was about 4.5 percentage points lower. This is because the Corridor encompasses the Commonwealth's largest cities with the densest land uses, the most robust transit and multimodal networks, and greater concentrations of lower-income, transit dependent populations. As a result, Corridor residents are better able to substitute Walking, Public Transit Rail, Public Transit Bus, or Biking for car-based journeys. Compared to the statewide share of transit-based trips, the tendency to use transit was 24 percent higher among Corridor residents, with 10 percent of all trips taken by rail or bus.

Travel Demand Patterns. The following are key patterns and trends related travel demand in the East – West Corridor, based on data from the 2010 Statewide Household Travel Survey (HHTS) and the US Census Bureau's Longitudinal-Employer Household Dynamics (LEHD) dataset.

- Statewide Travel Survey Patterns.** Table 3-8 on the next page shows the relative flow of residents living within 20 miles of a Corridor train station for all trip purposes, based on the HHTS. In general, attraction between the markets increases as the distance separating them decreases. In terms of magnitude, strong connections were observed between Worcester and Boston (320,700 trips). Ties between Springfield and Worcester (24,400 trips) and Pittsfield and Springfield (16,300 trips) made up the majority of the remainder. The following are some of the other travel patterns identified.

Table 3-8 – Relative Proportion of Travel Demand among the Corridor Markets for All Trip Purposes (2010 MA Statewide Travel Survey)

ORIGIN (ROWS) / DESTINATION (COLUMNS)	PIT	SPG	WOR	BOS	ALL
PIT		3%	<1%	<1%	4%
SPG	1%		3%	1%	5%
WOR	<1%	3%		63%	66%
BOS	<1%	3%	21%		25%
ALL	2%	10%	24%	64%	100%

- Of the trips among the East – West Corridor cities reported through the HHTS, nearly two-thirds (63 percent) have origins in Worcester and destinations in Boston.
- Trips with origins in Boston are most strongly attracted to Worcester.
- Residents of Pittsfield are mostly attracted to Springfield, and much less so to markets farther east.
- Springfield residents are mostly attracted to Worcester and showed same level of attraction to Pittsfield and Boston (about 1 percent to each).

Table 3-9 summarizes commuting activities between the Corridor markets. Of all the trips between the Corridor markets, 30 percent of the traffic, or roughly 114,100 trips, were completed for work purposes. Trip purpose is implicitly assumed within the base ridership forecasts, which initially used the CTrail Hartford Line stations as proxy pairs.

Table 3-9 – Commute Trips as Proportion of All Trips between Corridor Markets (2010 MA Statewide Travel Survey)

MARKET	WORK TRIPS FROM AS SHARE OF ALL TRIPS BETWEEN CORRIDOR MARKETS	WORK TRIPS TO AS SHARE OF ALL TRIPS BETWEEN CORRIDOR MARKETS
PITTSFIELD	11%	15%
SPRINGFIELD	27%	13%
WORCESTER	33%	27%
BOSTON	24%	34%
ALL	30%	30%

- **US Census Travel Patterns.** The US Census Bureau's LEHD dataset provides detailed origin-destination information for commute trips across the country. Using a 20-mile radius, the LEHD analysis identified approximately 237,000 commute trips among the Corridor markets. Table 3-10 on the next page summarizes the relative flows of commuters who live within 20 miles of one Corridor market (rows) and work in another (columns). Table 3-11 shows the degree to which connections to the other Corridor markets contribute to each market's local economy, either by providing residents with wages earned elsewhere (left column) or filling positions available locally (right column).

Table 3-10 – Relative Commute Flows among the Corridor Markets (US Census LEHD)

HOME (ROWS) /WORK (COLUMNS)	PIT	SPG	WOR	BOS	ALL
PIT		2%	1%	2%	5%
SPG	1%		5%	9%	15%
WOR	0%	5%		47%	52%
BOS	1%	5%	22%		28%
ALL	2%	12%	28%	58%	100%

Table 3-11 – Relative Employment Ties among the Corridor Markets as a Share of Total Employment (US Census LEHD)

MARKET	WORK TRIPS TO OTHER CORRIDOR MARKETS AS SHARE OF ALL COMMUTES FROM MARKET	WORK TRIPS FROM OTHER CORRIDOR MARKETS AS SHARE OF ALL COMMUTES TO MARKET
PITTSFIELD	19%	11%
SPRINGFIELD	14%	12%
WORCESTER	31%	18%
BOSTON	4%	7%
ALL	7%	7%

- More than half of the work trips (52 percent) originated in Worcester, with 15 percent beginning in Springfield and 28 percent in Boston.
- More than half of the work trips (58 percent) between Corridor markets were bound for Boston, with 28 percent destined for Worcester and 12 percent for Springfield.
- Two percent of work trips were bound for Pittsfield, whose workers were responsible for five percent of commute trips among the Corridor markets.
- Given their proximity and Boston's strong economy, the Worcester – Boston market pair accounted for nearly three quarters (69 percent) of commute trips.
- Springfield's relatively strong employment connections (both ways) with Worcester (10 percent) and Boston (14 percent) suggest potential demand for enhanced travel connections.
- Connections between Pittsfield and the Corridor markets made up 7 percent of all commute trips (5 percent from Pittsfield, 2 percent to Pittsfield).
- The Boston-bound commutes from Worcester and Springfield accounted for more than half (56 percent) of all commutes between the Corridor markets.

Table 3-12 and Table 3-13 on the following page show how each Corridor market contributes to economic activity. The first table shows the relative proportion of work location based on home location (i.e., 48 percent of residents living in other Corridor markets who reported to work in Pittsfield came from Springfield). The second table displays the relative proportion of home locations based on work location (i.e., 8 percent of workers who commuted from Springfield to other Corridor markets went to Pittsfield).

Table 3-12 – Relative Proportion of Worker Home Locations Based on Employment Location (US Census LEHD)

HOME (ROWS) / WORK (COLUMNS)	PIT	SPG	WOR	BOS
PIT		15%	3%	3%
SPG	~48%		18%	16%
WOR	~18%	42%		81%
BOS	~33%	43%	79%	
ALL	100%	100%	100%	100%

Table 3-13 – Relative Proportion of Employment Location Based on Worker Home Location (US Census LEHD)

HOME (ROWS) / WORK (COLUMNS)	PIT	SPG	WOR	BOS	ALL
PIT		42%	18%	40%	100%
SPG	8%		33%	59%	100%
WOR	1%	10%		89%	100%
BOS	3%	19%	78%		100%
ALL	~2%	~12%	~28%	~57%	100%

3.6. Issues and Opportunities

The following is a summary of the key issues and opportunities that the existing conditions in the East – West Corridor present for developing and evaluating potential East – West passenger rail infrastructure and service options.

- New England has many passenger rail lines with robust service and strong ridership, including both commuter rail and intercity passenger rail. However, since all Amtrak Northeast Corridor service was shifted away from the Inland Route to the electrified Shore Line in 2004, passenger rail service for Pittsfield and Springfield has been limited to one daily round trip via the Amtrak Lake Shore Limited. Amtrak has reduced the frequency to three round trips per week due to the COVID-19 pandemic.
- Two potential corridors were identified for providing passenger rail connections to the East – West service communities: the Boston – Albany rail mainline and the I-90/Massachusetts Turnpike corridors. Either corridor would require significant infrastructure improvements to enable more frequent passenger rail service.
- Boston – Albany Rail Mainline
 - West of Worcester, this rail line is owned by CSX, the third largest freight railroad in North America and the largest operating in New England. Implementing and operating increased passenger rail in this corridor would require an agreement for sharing the corridor.
 - The section of the rail corridor west of Worcester has not been maintained to the high levels required for frequent passenger service, and it includes many segments where the second track has been removed from the line: the 52-mile Springfield to Pittsfield segment of the corridor includes 13.5 miles of single-track rail alignment, and the Worcester to Springfield segment includes mostly single-track rail alignment, with 33 miles of single track and only 21 miles of double-track.

- East of Worcester, the rail line is owned by MassDOT and the MBTA, and use principally for high-frequency commuter rail service on the Framingham/Worcester Line, which provides 28 inbound weekday trains, 26 outbound weekday trains. The track infrastructure in this segment is in very good physical condition, but is heavily used by existing rail traffic.
- I-90/Massachusetts Turnpike Corridor
 - This corridor generally provides a straighter and wider alignment than the Boston – Albany rail mainline.
 - The I-90 corridor currently provides no railroad infrastructure; all new railroad infrastructure would need to be built.
 - The I-90 corridor does not provide direct access to existing downtown train stations in the East – West Corridor communities; new rail links would need to be provided, most likely via short connecting segments on the Boston – Albany mainline.
 - The I-90 corridor has significant width constraints inside of Route 128/Interstate 95, and could not accommodate a new passenger rail alignment in this segment.
- The East – West Corridor includes the communities with the highest population and employment in each part of the Commonwealth: western Massachusetts (Pittsfield and Springfield), central (Worcester), and eastern (Boston).
- Travel Patterns – Based on the Massachusetts Statewide Household Travel Survey, conducted in 2010 – 2011.
 - Of all trips among the four major cities in the Corridor, a large majority are between Worcester and Boston. This is likely due to the fact that these are the largest cities in the Commonwealth; there are more travel options, including frequent commuter rail service; Pittsfield and Worcester are significantly farther from Boston, the largest population and employment center; and highway congestion in eastern

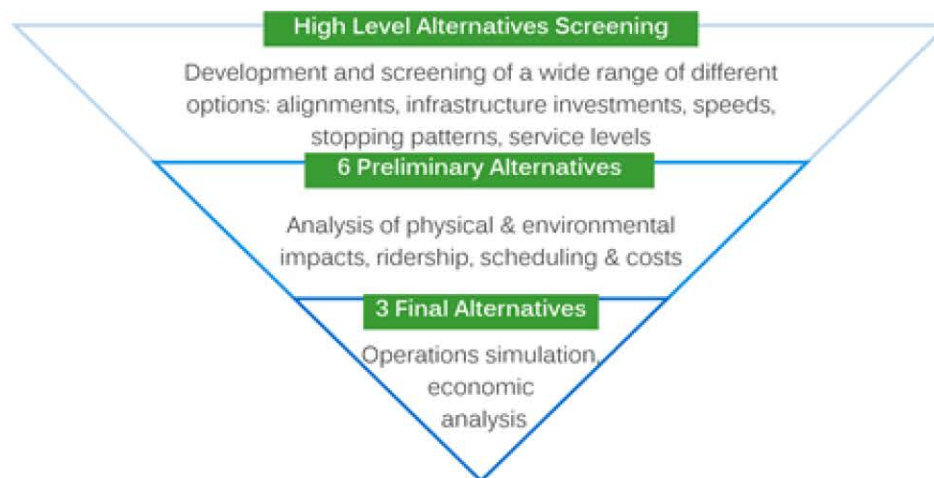
Massachusetts can be a significant barrier, especially for longer trips from the western part of the Commonwealth. Other example corridors such as the 91-mile long Philadelphia to New York corridor have very competitive rail service due to large historic investments in rail infrastructure and high quality service.

- Work-related travel accounted for about 30 percent of all trips among the cities in the East – West corridor.
- Work trips generally follow similar patterns to overall trips, with the level of trip-making proportional to the size and proximity of the cities.

4. Alternatives Development and Analysis

The alternatives analysis is the central component of the study's technical analysis. As seen in Figure 4-1, the process begins with the development of the universe of alternatives, followed by a screening to identify six Preliminary Alternatives, an evaluation of those alternatives, and a refined re-evaluation of the three Final Alternatives to determine the study's findings. The Preliminary and Final Alternatives are designed to address the study's goals and are assessed based on a set of evaluation criteria that reflect its objectives.

Figure 4-1 – Study Process & Overview



4.1. Guiding Principles and Universe of Alternatives

The study's Preliminary Alternatives were developed to provide a representative range of different options for potential passenger rail service that connects communities along the East-West Corridor, spanning the full spectrum of speed, service, infrastructure, cost, and impacts. To achieve this, different options for the various infrastructure and service parameters were assembled in such a way that they balanced the key objectives that the alternatives are intended to deliver, which are outlined below. Many of these objectives are in tension with each other, or even in direct conflict.

Ridership Enhancing

- **Maximize travel speeds/minimize travel time**
 - Minimize rail alignment curvature and grades
 - Enhance railroad infrastructure and speeds operated
 - Minimize interference between passenger and freight
 - Minimize number of station stops
- **Maximize service quality**
 - Maximize direct rail service to East – West Corridor communities
 - Minimize required transfers
 - Maximize train frequency

1. **Corridor Type:** Existing Shared Corridor (Upgrade Existing Shared Passenger-Freight Track or Build New Passenger-Only Track) and Separate Corridor
2. **Technology / Mode:** Conventional Rail, High Speed Rail, Maglev, Hybrid Rail-Bus, and Bus Rapid Transit
3. **Major Markets Served:** Springfield – Boston, Pittsfield – Boston, Greenfield – Boston, New Haven – Boston, Existing MBTA Commuter Rail Worcester Line Stations
4. **Service Pattern:** Base (Major Markets), Options (All Corridor Stations), and Shuttle (All Corridor Stations with Extensions West of Springfield)

Although one subset of alternatives explored new service stopping at all MBTA Commuter Rail stations served by Worcester-based trains, each of the Preliminary Alternatives proposes intercity service that would operate over long distances with limited stops, such as Amtrak's Northeast Regional or its high speed Acela Express Service.

4.2. Alternatives Development

This section describes the study's general approach to identifying the Preliminary Alternatives for further study and evaluation. To develop the alternatives, it is necessary to define the key parameters that will determine the defining characteristics for the Preliminary Alternatives and serve as differentiating features for assessing each alternative's benefits, costs, and impacts. These key parameters comprise the following elements:

- **Infrastructure Elements**
 - Corridor Type
 - Infrastructure Improvements
 - Corridor Constraints
 - Potential Speeds

- **Service Elements**
 - Extent of Rail Service
 - Stations Served
 - Frequency

Corridor Type. Two central parameters that help to determine many of the other corridor characteristics are the corridor's alignment and the configuration of the rail line within that alignment. As summarized in Table 4-1 on the next page, this study evaluated three main approaches to defining the future passenger rail service's corridor and alignment, providing a critical framework for the development of alternatives.

- **Shared Track and Corridor.** The most straightforward alignment approach is one in which the new passenger service traverses the existing Boston – Albany mainline rail corridor on the same tracks that are used by freight trains. Under this alignment approach, the new passenger service could be the easiest to implement and require the lowest capital investment as it would utilize the existing right-of-way. This corridor would, however, be limited by the existing rail layout's geometry and infrastructure. Operations would also be constrained by the presence of freight traffic, which would take precedence over passenger trains. While the least physically-involved, this approach could result in the longest travel times. Because the rail line is privately-owned west of Worcester, it would require careful coordination with CSX Transportation, the owner and operator of the tracks. For context, this shared corridor/shared track approach was utilized within NNEIRI's preferred alternative.
- **Separated Track in a Shared Corridor.** The next level of corridor alignment improvement would entail a new, separate rail alignment and track within the existing rail corridor. In this alignment approach, the passenger service could operate on a new passenger-only single track between Springfield and Worcester that remains primarily within the existing CSX-owned right-of-way.

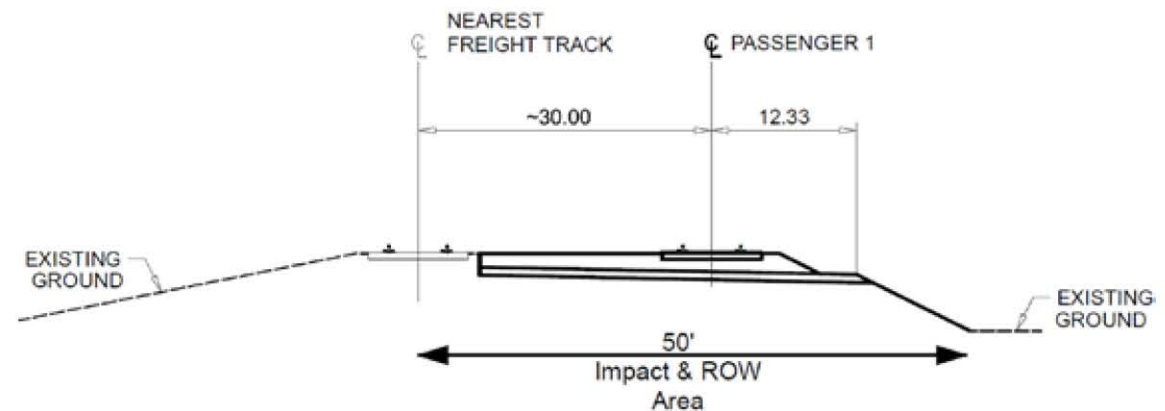
Table 4-1 – Corridor Characteristics of Potential Alternatives

CORRIDOR TYPE / ALIGNMENT	SPRINGFIELD – WORCESTER SEGMENT	PROS	CONS
SHARED CORRIDOR / EXISTING ALIGNMENT	Runs along the existing CSX corridor, sharing the same tracks used by freight trains. Restores full double-track operation	- Easiest to implement - Lowest capital cost	- Contending with freight traffic - Existing infrastructure - Existing geometry
SHARED CORRIDOR / SEPARATE ALIGNMENT	Remains primarily within CSX-owned ROW, but uses a new passenger-only track where feasible that can also feature key realignments	- Higher speeds - Much lower operational impacts relative to the entirely new alignment and corridor	- Overall corridor geometry still limits maximum speeds - Additional ROW and capital costs required
SEPARATE CORRIDOR / NEW ALIGNMENT	Parallels the I-90 ROW, deviating back to existing corridor only to serve downtown rail stations	- Highest speeds - No interference to existing railroad usage	- Highest capital cost - Most ROW and community impacts

The new rail layout could enable the passenger trains to operate separately from freight trains and to achieve higher speeds and faster travel times. However, maximum operating speeds would still be constrained by the overall geometry of the historic corridor, which winds through river valleys and was laid out in the early 19th century. This approach is only feasible between Springfield and Worcester, and would entail significant infrastructure investment. Between Pittsfield and Springfield, the CSX-owned right-of-way is significantly narrower, and more constrained by steep topography and environmentally sensitive natural features such as major sections of the Westfield River. Between Worcester and Boston, the rail corridor is narrower and much more constrained by private property and

buildings; a separate rail alignment is also not feasible in this segment. Between Springfield and Worcester, it is also feasible to construct the new track alignments to straighten the tightest curves and further reduce travel times through sustained high-speed operations. Figure 4-3 provides a typical cross section showing the location of the separate track(s) from the existing freight tracks.

Figure 4-3 – Typical Cross Section for Separated Track in a Shared Corridor



- **New Track Alignment in a Separate Corridor.** The Boston – Albany rail mainline’s overall corridor alignment and geometry are not compatible with very high-speed passenger service. Therefore, a high-speed rail service would require a fully-separated corridor that utilizes an entirely new alignment. The I-90 corridor was the only feasible corridor identified that would enable the connections required and allow a straighter alignment with significantly higher speeds, while limiting the environmental and community impacts relative to those that would be associated with a new high-speed rail alignment in the East – West Corridor. It should be noted that this approach would still have much higher capital cost and much greater environmental and property impacts than any of the alternatives that make use of the existing rail corridor.

Infrastructure Improvements. The different approaches to the overall corridor and railroad alignment for the Preliminary Alternatives entail different types of infrastructure improvements.

- **Track Improvements.** Improvements to the existing railroad infrastructure to comply with federal standards and permit higher speeds. New track construction would also meet the higher speed standards.
- **Double-Track Restoration.** Historically, the Boston – Albany mainline provided a minimum of two continuous railroad tracks. However, as the infrastructure aged and rail traffic decreased, some segments of second track were removed to save on both capital and maintenance costs. These missing double-track segments would need to be restored for any of the alternatives that would provide service on a shared track configuration.
- **New Railroad Alignment.** Preliminary Alternatives that do not rely upon existing tracks would require new track construction. This may be parallel to the rail line within the CSX-owned corridor; on a new,

straighter rail alignment outside the CSX-owned corridor; or on an entirely new rail alignment in the I-90 corridor.

- **Other Infrastructure Investments.** The Preliminary Alternatives also entail other improvements needed to support operation of the rail service.
 - **Train Control/Signal Systems.** Federal regulations require use of a compliant train control/signal system to operate trains at the speeds identified in any of the alternatives. Depending on whether existing or new rail alignments are used, the Preliminary Alternatives would provide upgraded or new train control/signal systems between Pittsfield and Boston. This would include improvements to warning devices at highway-rail grade crossings as well as at interlockings (specialized rail facilities that allow controlled train movements to cross from one track to another). The extent and location of additional signal improvements would be based on planned freight and passenger train frequencies and changes in operating speed. Full signalization systems would need to be installed in any segments with new passenger tracks. All signal systems would need to provide Positive Train Control (PTC), as required by federal law.
 - **Layover and Maintenance Facility.** Train operations require facilities for train storage, safety inspections, restocking, and light maintenance, as well as facilities for train crews: briefing rooms, locker rooms, and break rooms, etc. Each of the Preliminary Alternatives is assumed to require (and include) construction of a new layover and maintenance facility near Springfield and/or Pittsfield. Existing or expanded facilities at Boston are assumed to be adequate to meet East-West train servicing needs. Tracks would need to be configured long enough to accommodate the new layovers. New facilities, including the addition of switches, lighting, access aisles,

ground power (480v), water stations, inspection, servicing, fueling and sanding facilities, staff support building(s), parking and security facilities, etc., would also be necessary.

- **Electrification of Routes.** The operations analysis for each scenario considered the use of electric locomotives for propulsion in lieu of diesel-electric locomotives that now operate on the East-West Corridor. Their use was not required to achieve the planned travel times except for High-Speed Scenario #2. Nevertheless, recognizing the environmental and social benefits electrification offers, electrification over the Boston-Worcester rail section owned by the Commonwealth or over the Worcester-Springfield section in scenarios where independent passenger tracks are constructed is not precluded. CSX policy guidance will not permit electrification of the Springfield-Pittsfield section.

Corridor Constraints. The overall corridor approach (shared rail corridor vs. separate corridor, shared rail line vs. separate rail line) strongly influences the geometric constraints and property impacts that would be associated with each alternative. As discussed in Section 3, the Boston – Albany rail mainline has different basic characteristics and constraints in its three distinct segments: the Pittsfield – Springfield segment has the greatest geometric and topographic challenges; the Springfield – Worcester segment has more moderate horizontal and vertical curvature challenges; and the fully double-tracked Worcester – Boston segment currently has the least challenging rail alignment due to the most moderate topography and significant investments to improve the geometry and infrastructure made over many years to support the high level of passenger service currently offered. Study alternatives that add new track segments to the existing rail corridor (i.e. through the restoration of double-track or the creation of new rail alignments or new sidings) may result in impacts to property, environmental, and

community resources. The I-90 corridor provides a straighter alignment than the existing rail corridor, but would entail greater property impacts, especially at “transition” segments where the new service migrates between the I-90 corridor and existing rail stations in downtown Springfield and Worcester.

Travel Speeds. Attaining higher travel speeds and lower travel times for the East – West Passenger Rail service is a key pursuit within the study, and is therefore a key parameter for developing the Preliminary Alternatives. The travel speeds that could be attainable for a given alternative are closely related to the corridor type and corridor constraints. To understand the range of potential passenger rail speeds for the alternatives, different corridor scenarios were evaluated for their impact on maximum and lower average speeds that ultimately determine the travel time, as summarized in Table 4-2 on the following page.

- The **Base Speed Scenario** assumes no modifications to geometry or infrastructure conditions, with maximum passenger train speeds of 60 mph (Federal Railroad Administration (FRA) Class 3) west of Worcester. In this scenario, the service could operate like a typical passenger train sharing the railroad corridor with freight trains.
- The **Medium Speed Scenario** could enable significant speed increases while still relying on existing corridor geometry. Although geometry would remain unchanged and the service could continue to rely on a shared corridor, maximum speeds could rise to 80 or 90 mph (FRA Class 4 or 5) via significant infrastructure upgrades. These adjustments could allow for an increase in the degree of superelevation and unbalance permitted as trains pass through horizontal curves, and a decrease in the number of non-geometric speed restrictions.

Table 4-2 – Speed Characteristics of Potential Alternatives

SPEED SCENARIO	CORRIDOR TYPE / ALIGNMENT	MAXIMUM PASSENGER TRAIN SPEED (*)	REQUIRED FRA TRACK CLASS	SOURCE OF SPEED IMPROVEMENTS
BASE	Shared Corridor / Existing Alignment	60 mph	Class 3	- Existing Pittsfield to Worcester - Existing Worcester to Boston
		80 mph	Class 4	
MEDIUM	Shared Corridor / Existing Alignment	80 / 90 mph	Class 4 / 5	- Reduction in non-geometric/signal speed restrictions - Increased superelevation and unbalance
HIGH #1	Shared Corridor / Separate Alignment	110 mph	Class 6	- Elimination of non-geometric/signal speed restrictions - Significant realignment of horizontal curves (vertical grades maintained)
HIGH #2	Separate Corridor / New Alignment	160 mph	Class 8	- Elimination of non-geometric/signal speed restrictions - Corridor-wide electrification and the use of electric trainsets

- **High-Speed Scenario #1** requires a new separate passenger-only track running adjacent to the existing corridor, along with significant realignment of sharp horizontal curves, to achieve maximum speeds of 110 mph (FRA Class 6).
- **High-Speed Scenario #2** requires a new rail corridor adjacent to the I-90 ROW, which has fewer horizontal curves than the existing railroad, to realize maximum speeds of 160 mph. Since modern diesel trainsets cannot operate faster than approximately 125 mph, this highest speed scenario would require electrification of the entire corridor.
- **High-Speed Scenario #2** requires a new rail corridor adjacent to the I-90 ROW, which has fewer horizontal curves than the existing railroad, to realize maximum speeds of 160 mph. Since modern diesel trainsets cannot operate faster than approximately 125 mph, this highest speed scenario would require electrification of the entire corridor.

The travel times for the Preliminary Alternatives are based upon the

construction of detailed train schedules that “fit” East – West trains into available schedule “slots” that reflect existing passenger and freight operations. These detailed operations plans modelled operating speeds for East – West trains taking into account acceleration/deceleration rates and maximum speed capabilities of actual high-speed locomotive and car designs and considering each Preliminary Alternative’s modifications to horizontal and vertical track alignment to reflect maximum and restricted speed areas. Schedules for the new passenger service are also planned to offer convenient arrival and departure times for commuters reporting to employment sites located in the major East – West Corridor cities.

Extent of Rail Service. A key characteristic of the Preliminary Alternatives is the extent of the coverage of rail service within the East – West Corridor. Given the study’s purpose and need, the corridor geography, and the high population of the Springfield metropolitan area, it was assumed that new rail service would be uniformly provided between Springfield and Worcester. Population along the corridor west

of Springfield is significantly lower, and corridor constraints are generally greater. In order to evaluate the benefits relative to the costs of providing rail service, some of the Preliminary Alternatives provide rail service in the western segment of the corridor, while others provide enhanced bus service with connections to rail service in Springfield.

Stations Served. A critical service parameter is the number and location of station stops. While more stops would provide a greater level of access to the new service, end-to-end travel times would increase. On many rail corridors, express service is necessary to take advantage of higher operating speeds and maximize the efficiency of train services. The station stops designated for the Preliminary Alternatives were evaluated relative to population, geography, existing and proposed intermodal connections, and commercial activity. The following existing stations are included in all Preliminary Alternatives: Pittsfield (Joseph Scelsi Intermodal Transportation Center), Springfield (Union Station), Worcester (Union Station), and Boston (Lansdowne, Back Bay, and South Station). These stations serve the major markets along the East – West Corridor and could be able to attract the highest number of potential riders. Other stations considered for inclusion in the Preliminary Alternatives are potential new stations along the existing rail corridor at Chester and Palmer, and new stations along the I-90 corridor in Lee and Blandford, which would be served by some of the Preliminary Alternatives. New stations in Chester and Palmer were included in the analysis as a result of local and regional advocacy efforts, as well as Palmer's previous inclusion within the NNEIRI study. New stations at existing interchanges along the I-90 corridor were selected to serve a similar set of communities while balancing stop spacing between Pittsfield and Springfield. The determination to include or not include the additional stations was to evaluate the travel time benefits and ridership changes to the overall service with or without the station stops.

Service Frequency. Service frequency is a critical determinant of an alternative's capacity to carry passengers and the convenience of the service's schedule. Frequency for the alternatives and for individual stations would vary based on the level of capital investment in rolling stock, anticipated demand, travel times, stopping patterns, and transfer patterns. The service frequency provided was aimed to optimize ridership by taking advantage of the scale of capital investments and infrastructure improvements. Alternatives with lower capital cost investment and infrastructure improvements that are limited to the upgrades of the existing tracks would operate with lower service frequency, while alternatives with higher capital investments and infrastructure improvements that include track realignment or new track construction would be able to operate at faster speeds and higher frequency.

4.3. Preliminary Alternatives

This section describes each Preliminary Alternative and provides a summary graphic of the infrastructure improvements, scheduled speeds, and extent of service proposed. Table 4-3 and Table 4-4 on the following pages provide an overview of each alternative's service characteristics, including frequency, travel times, speeds, and other important metrics. Three of the evaluated Alternatives include portions of the route being served through complementary connecting bus service, similar to many other corridor services in the nation. The bus schedules were designed to provide convenient connections to each train and could operate in a dedicated service to ensure the connecting bus was always present in the event of off-schedule train operations.

Table 4-3 – Passenger Rail Service Characteristics (Preliminary Alternatives)

METRIC /	ALTERNATIVE	NO-BUILD	1	2	3	4	5	6
CORRIDOR TYPE	ALIGNMENT	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
FREQUENCY	RAIL ROUND TRIPS	1	5	7	8	10	10	18
SPEEDS	MAX. PERMITTED (MPH)	80	80	80	90	110	110	150
TRAVEL TIMES RANGE +	PITTSFIELD – BOSTON	3:50	3:55 – 4:10	3:35 – 3:50	3:05 – 3:20	2:55 – 3:10	2:55 – 3:10	2:15 – 2:30
TRAVEL TIMES RANGE +	SPRINGFIELD – BOSTON	2:28	2:40 – 2:55	2:10 – 2:25	1:50 – 2:05	1:40 – 1:55	1:30 – 1:45	1:15 – 1:30
EAST-WEST STATIONS ++	PITTSFIELD	√	(Bus)	(Bus)	√	√	(Bus)	√
EAST-WEST STATIONS ++	LEE	-	(Bus)	(Bus)	-	-	(Bus)	√
EAST-WEST STATIONS ++	CHESTER	-	-	-	√	√	-	-
EAST-WEST STATIONS ++	BLANDFORD	-	(Bus)	(Bus)	-	-	(Bus)	√
EAST-WEST STATIONS ++	SPRINGFIELD	√	√	√	√	√	√	√
EAST-WEST STATIONS ++	PALMER		√	√	√	√	-	√
EAST-WEST STATIONS ++	WORCESTER	√	√	√	√	√	√	√
EAST-WEST STATIONS ++	LANSDOWNE	√	√	√	√	√	√	√
EAST-WEST STATIONS ++	BACK BAY	√	√	√	√	√	√	√
EAST-WEST STATIONS ++	SOUTH STATION	√	√	√	√	√	√	√
TRANSFERS	PITTSFIELD	Direct Rail	Bus Transfer at SPG	Bus Transfer at SPG	Direct Rail	Direct Rail	Bus Transfer at SPG	Direct Rail
TRANSFERS	SPRINGFIELD	Direct Rail	Rail Transfer at WOR	Direct Rail	Direct Rail	Direct Rail	Direct Rail	Direct Rail
TRANSFERS	CTrail HARTFORD LINE / AMTRAK VERMONT	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG

+ SCHEDULED TRAVEL TIMES RANGE

++ RAIL STATIONS SERVED BY EAST-WEST TRAINS

Table 4-4 – Operations, Equipment, Fleet & Maintenance Characteristics (Preliminary Alternatives)

METRIC /	ALTERNATIVE	NO-BUILD	1	2	3	4	5	6
CORRIDOR TYPE	ALIGNMENT	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
FREQUENCY	TRAIN ROUND TRIPS	1	5	7	8	10	10	18
FREQUENCY	BUS ROUND TRIPS	0	4	4	0	0	11	0
AVERAGE SPEED (MPH)	PITTSFIELD-BOSTON	39.3	37.4	41.3	47.8	50.5	50.1	65.2
AVERAGE SPEED (MPH)	SPRINGFIELD-BOSTON	39.9	35.5	44.0	50.4	55.1	62.7	74.3
TRAVEL TIME (BOSTON) +	PITTSFIELD	3:50	4:02	3:39	3:09	2:59	3:00	2:18
TRAVEL TIME (BOSTON) +	LEE	-	3:27	3:04	-	-	2:25	2:04
TRAVEL TIME (BOSTON) +	CHESTER	-	-	-	2:38	2:28	-	-
TRAVEL TIME (BOSTON) +	BLANDFORD	-	3:07	2:44	-	-	2:05	1:47
TRAVEL TIME (BOSTON) +	SPRINGFIELD	2:28	2:46	2:14	1:57	1:47	1:34	1:19
TRAVEL TIME (BOSTON) +	PALMER	-	2:27	1:55	1:40	1:31	-	1:03
TRAVEL TIME (BOSTON) +	WORCESTER	1:15	1:21	1:03	0:53	0:53	0:53	0:44
EQUIPMENT ASSUMPTIONS	TRAINSETS	2	3	5	7	8	5	10
EQUIPMENT ASSUMPTIONS	TRAINSET TYPE	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Electric
EQUIPMENT ASSUMPTIONS	BUSES	0	2	2	0	0	3	0
FLEET REQUIREMENTS	TOTAL RAIL CARS	8	11	31	31	35	22	44
FLEET REQUIREMENTS	TOTAL BUSES	0	2	3	0	0	4	0
DAILY REVENUE MILES	TRAIN MILES	400	832	1,400	2,196	2,588	2,164	4,804
DAILY REVENUE MILES	RAIL CAR MILES	3,600	4,160	10,000	12,278	14,540	10,820	25,620
DAILY REVENUE MILES	BUS MILES	0	848	624	0	0	2,200	0
LAYOVER ++	PITTSFIELD	0	0	0	3	3	0	5
LAYOVER ++	SPRINGFIELD	0	1	1	0	1	2	0
LAYOVER ++	BOSTON	1	0	3	3	3	2	4

+ SCHEDULED TRAVEL TIMES TO/FROM BOSTON (AVERAGE)

++ OVERNIGHT LAYOVER LOCATION (TRACKS)

Alternative 1: Passenger Rail, Springfield – Worcester, on Upgraded Existing Railroad Tracks (Bus Service West of Springfield)

Alternative 1 represents the lowest capital cost concept studied and would make track and signal improvements to introduce a new direct passenger rail service between Springfield and Worcester along the shared corridor, with an intermediate stop in Palmer. Passengers would be required to transfer between the new passenger service and existing MBTA Framingham / Worcester Line trains at Worcester's Union Station. A new bus service would enable passengers located near Pittsfield, Lee, and Blandford to connect with rail services in Springfield and Worcester, as shown in Figure 4-4 on the next page.

Alternatives 1 would restore three missing double-track segments; develop a new passing siding near the Spencer-East Brookfield border; and upgrade signal systems along the Springfield to Worcester segment. These enhancements would effectively increase the amount of operating space within this shared passenger-freight corridor.

Alternative 1 rail service would comprise up to four new weekday rail round trips between Springfield and Worcester. Connecting with the existing Heart to Hub MBTA Commuter Rail express service would produce one weekday round trip with Pittsfield to Boston travel times similar to existing Amtrak Lake Shore Limited operations. However, for the other three round trips, the need to transfer trains at Worcester Union Station, coupled with serving local stops along the MBTA Worcester Line, would produce a service that, on average, takes 15 minutes longer than the Lake Shore Limited between Springfield and South Station (2:46).

The rail service would be supplemented by up to four weekday round trip bus connections that allow customers coming to and from existing

bus stops located in Pittsfield (Joseph Scelsi Intermodal Transportation Center) and Lee (Premium Outlets), as well as a new bus stop near the I-90 Blandford Service Plaza, to connect with rail services in Springfield and Worcester.

Alternative 2: Passenger Rail, Springfield – Boston, on Upgraded Existing Railroad Tracks (Bus Service West of Springfield)

Alternative 2 would utilize the same set of infrastructure and signal improvements included in Alternative 1 to provide a new direct passenger rail service along the shared corridor between Springfield and Boston (South Station), with intermediate stops in Palmer, Worcester, and Boston (Lansdowne and Back Bay). The service would utilize extensions of selected existing MBTA trains to Springfield which was considered the maximum realistic distance a commuter-type train could be extended to. To complement the up to six new weekday rail round trips, passengers coming to or from markets west of Springfield would use up to four new bus round trips serving Pittsfield, Lee, Blandford, and Springfield, as seen in Figure 4-5 on page 47.

Since the corridor's existing alignment and its track classification would remain unchanged in both Alternatives 1 and 2, maximum permitted speeds would remain at existing levels. Nevertheless, the improvements between Springfield and Worcester, when coupled with removing the transfer at Worcester, would save 15 minutes for trips between Springfield and South Station (2:14) relative to existing Lake Shore Limited travel time. Capitalizing on the improvements to the central segment, trips between Pittsfield and South Station would be approximately 10 minutes faster (3:39).

Figure 4-4 – Alternative 1 – Passenger Rail, Springfield – Worcester, on Upgraded Existing Railroad Tracks (Bus Service West of Springfield)

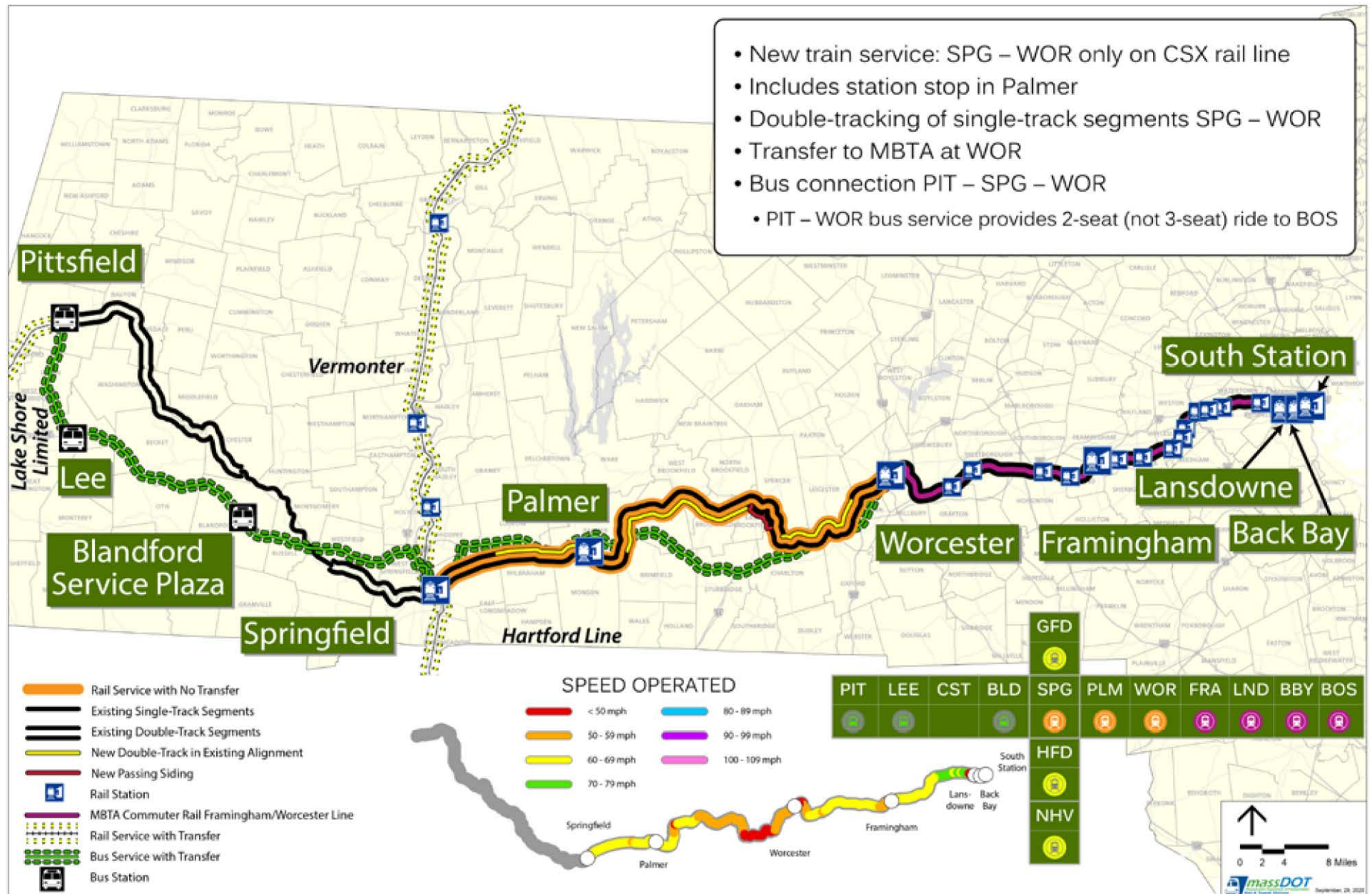
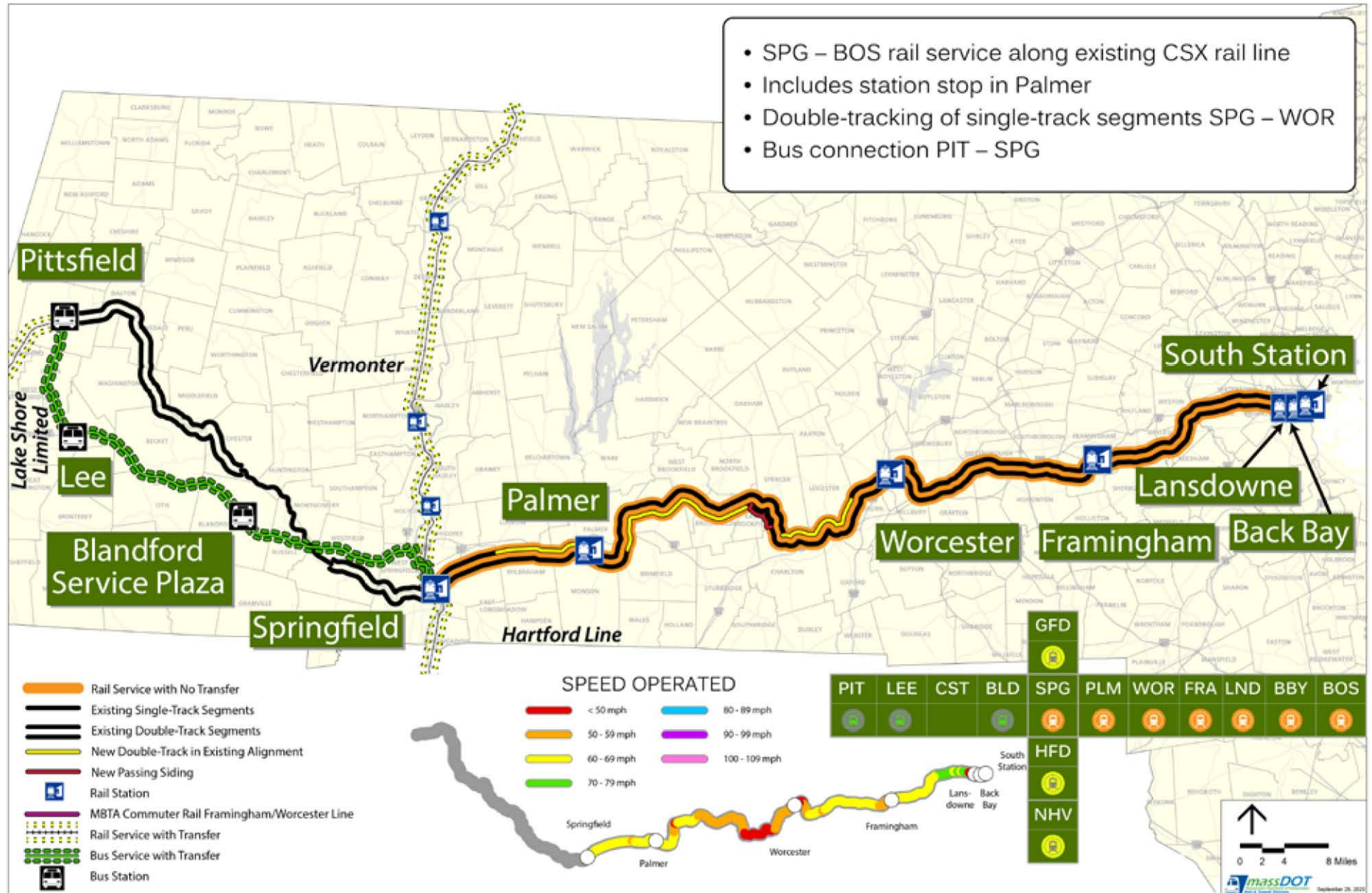


Figure 4-5 – Alternative 2 – Passenger Rail, Springfield – Boston, on Upgraded Existing Railroad Tracks (Bus Service West of Springfield)



Alternative 3: Passenger Rail, Pittsfield – Boston, on Upgraded Existing Railroad Tracks

Alternative 3 would provide a new direct passenger rail service along the shared corridor between Pittsfield and Boston (South Station), with intermediate stops in Chester, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay). As indicated in Figure 4-6 on the following page, the service would include up to seven new weekday rail round trips between Pittsfield and South Station, with service provided at every rail station along the existing corridor.

Between Pittsfield and Springfield, Alternative 3 would restore the missing double-track segment and upgrade signals to increase maximum permitted speeds from 50 to 70 mph west of Springfield in some sections. Relative to existing conditions, these improvements would save 10 minutes for journeys along the western segment.

In addition to incorporating the infrastructure and signal improvements proposed in Alternatives 1 and 2, Alternative 3 would increase maximum permitted speeds between Springfield and Worcester by making significant rail upgrades along the full central segment. This would raise the minimum track classification from Class 3 (with a limit of 60 mph for passenger operations) to either Class 4 (80 mph) or Class 5 (90 mph). Relative to Alternative 2, the addition of these track upgrades would produce a roughly 5-minute travel time savings for trips between Springfield and Worcester (10 minutes relative to existing conditions), with typical travel times along the central segment near an hour (1:04). The use of track classifications to describe the speed capability of the line segment is based upon the minimum class needed to comply with the regulations and is not intended to imply the actual maintenance standards CSX or the MBTA apply to the route. While specific asset conditions were not available for this study, it is assumed the entire route is well-maintained in excess of the minimum Track Class standards

needed to operate at the posted speeds.

When taken together, Alternative 3's improvements along the three segments would produce a roughly 40-minute end-to-end travel time savings relative to existing conditions (3:09). The savings of 35 minutes between Springfield and Boston would reduce travel times to below two hours (1:57).

Alternative 4: Passenger Rail, Pittsfield – Boston: Upgraded Existing Rail (PIT – SPG), New Rail in CSX Corridor (SPG – WOR)

Alternative 4 would offer a new direct passenger rail service between Pittsfield and Boston (South Station), with intermediate stops in Chester, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay). Beyond Alternative 3's improvements along the western segment, Alternative 4 could enable faster travel times through the construction of a new passenger-only track between Springfield and Worcester within the CSX-owned rail corridor, but offset from the existing railroad alignment, as shown in dark red within Figure 4-7 on page 50.

This exclusive track would provide speed and reliability benefits by separating passenger trains from freight movements along the CSX mainline. It would enable higher maximum permitted speeds, with construction of the new track designed for FRA Track Class 6 (110 mph). Three new passing sidings, each providing 3,000 feet of tangent track and spaced roughly 15 miles apart, would be installed along the south side to enable efficient train scheduling and safe passing of trains traveling in opposite directions. Extending the separate passenger track west of Springfield was evaluated and determined not feasible. The mountainous topography and significant sections of the route being located within environmentally sensitive lands effectively prevents construction along a separated alignment. Therefore, Alternative 4 assumes the same infrastructure improvements between Springfield and Pittsfield identified for Alternative 3.

Figure 4-6 – Alternative 3 – Passenger Rail, Pittsfield – Boston, on Upgraded Existing Railroad Tracks

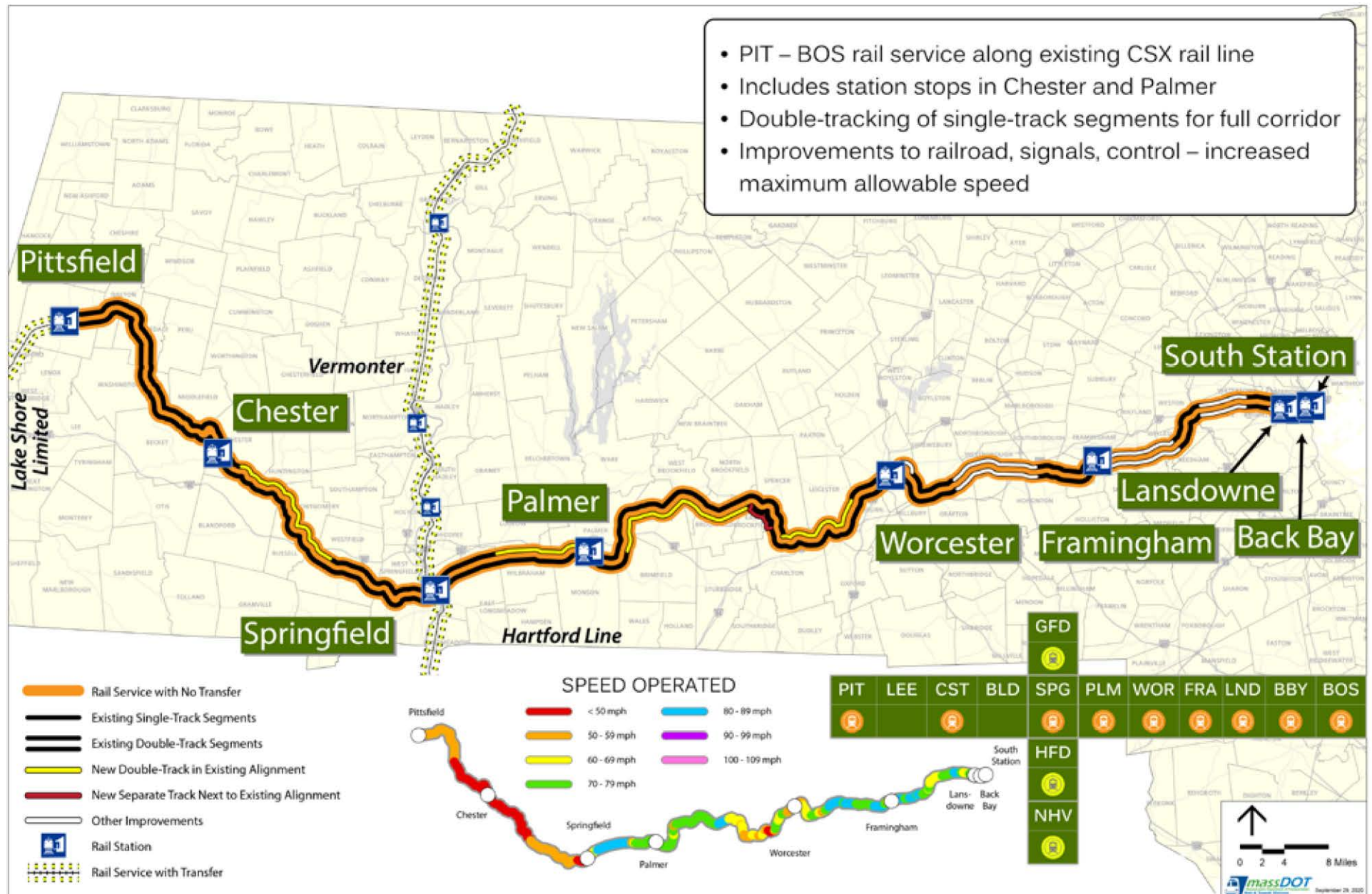
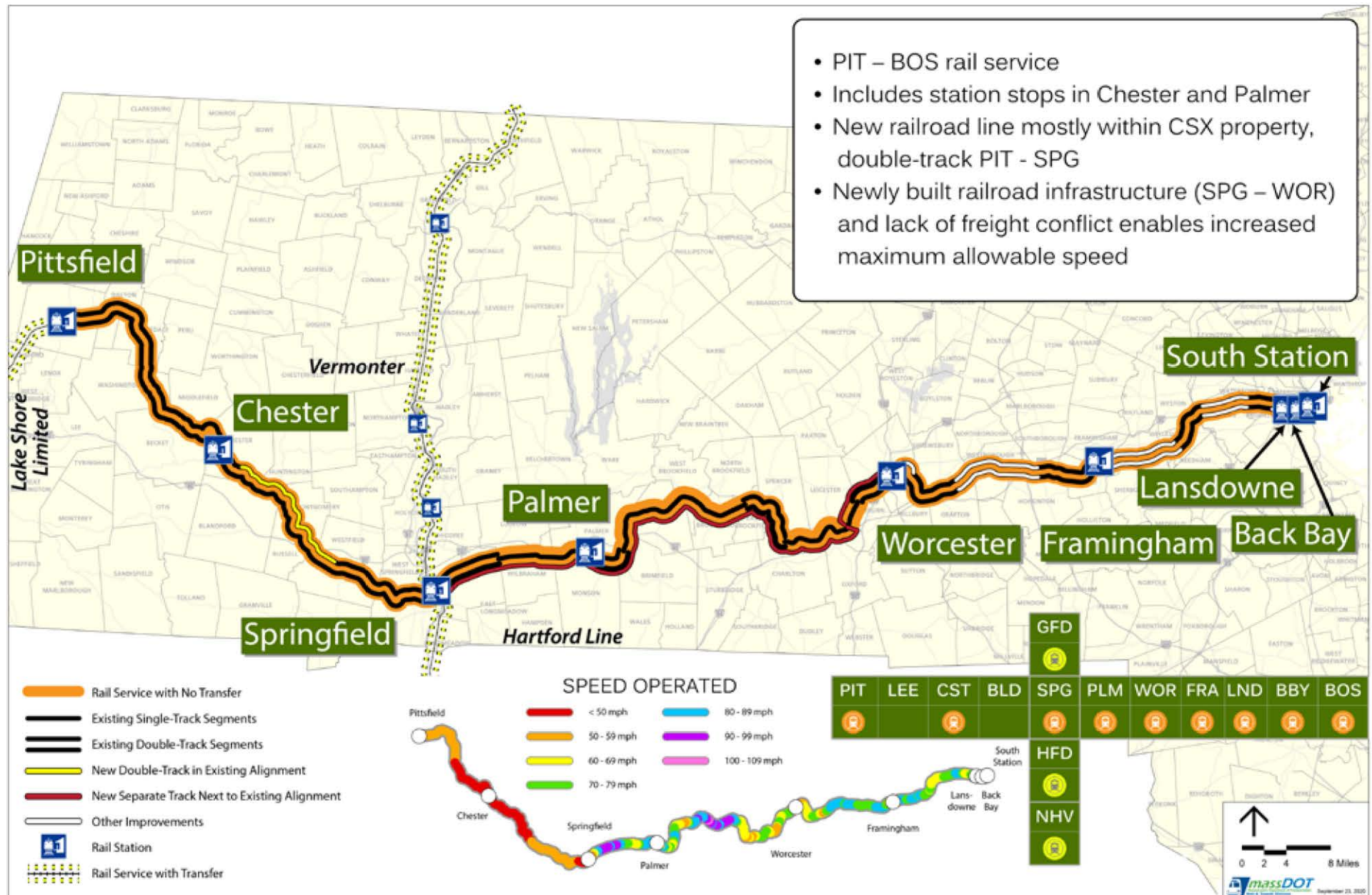


Figure 4-7 – Alternative 4 – Passenger Rail, Pittsfield – Boston: Upgraded Existing Rail (PIT – SPG), New Rail in CSX Corridor (SPG – WOR)



- PIT – BOS rail service
- Includes station stops in Chester and Palmer
- New railroad line mostly within CSX property, double-track PIT - SPG
- Newly built railroad infrastructure (SPG – WOR) and lack of freight conflict enables increased maximum allowable speed

To complement the higher level of infrastructure investment, rail service frequencies under Alternative 4 would increase to a total of up to nine new weekday round trips Pittsfield and South Station. End-to-end trip times would decrease by 50 minutes relative to the No-Build Alternative (2:59), with a 40-minute savings between Springfield and Boston (1:47).

Alternative 5: Passenger Rail, Springfield – Boston: New Rail with Priority Realignment (SPG – WOR), Bus Service West of Springfield

Alternative 5 would establish a new direct passenger rail service between Springfield and Boston (South Station), with intermediate stops in Worcester and Boston (Lansdowne and Back Bay). To connect with up to nine new weekday passenger rail round trips at Union Station, passengers in markets west of Springfield could use up to 11 new weekday bus round trips serving Pittsfield, Lee, and Blandford, as seen in Figure 4-8 on the next page.

Alternative 5 introduces the most dramatic infrastructure improvements found within any alternative along the CSX corridor to reduce overall travel times. Between Springfield and Worcester, Alternative 5 would include seven curve realignments to mitigate speed constraints presented by the challenging existing horizontal and/or vertical profiles. The new curve alignments permit sustained high-speed (95-105 mph) operation in order to achieve substantive travel time reductions. Since they deviate from the existing corridor, these shortcut segments present additional impacts in the communities of Warren, West Brookfield, East Brookfield, Charlton, Oxford, and Auburn. Relative to Alternative 4, these adjustments, coupled with not stopping at Palmer, would save over 10 minutes along the central segment (30 minutes overall), with travel times between Springfield and Worcester approaching 40 minutes.

In Alternative 5, trips between Springfield and Boston would take

nearly an hour less (55-minute savings), with journeys approaching an hour and a half (1:34). Although trip times between Pittsfield and Boston are still 50 minutes shorter than in existing conditions, reliance on connecting bus services west of Springfield offsets the travel time savings generated along the central segment, with trips between Pittsfield and Boston remaining similar to Alternative 4 (3:00).

Alternative 6: High-Speed Passenger Rail, Pittsfield – Boston, with New Rail Alignment in Separate I-90 Corridor

Alternative 6 would provide a direct high-speed passenger rail service between Pittsfield and Boston (South Station), with intermediate stops in Lee, Blandford, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay), primarily via a new alignment running parallel to or along Commonwealth-owned transportation assets (i.e. I-90 and the Housatonic Railroad), as indicated in Figure 4-9 on page 53. This would entail construction of an entirely new railroad line that is principally at-grade, but with significant segments of elevated rail viaduct to overcome property constraints and conflicts with roadway crossings. Consistent with the significantly greater infrastructure investment, service frequencies would be substantially increased, with up to 17 new weekday rail round trips between Pittsfield and South Station.

The use of state-owned ROWs along existing or historic transportation corridors would enable higher passenger train speeds by avoiding significant horizontal and vertical curves west of Worcester found in the rail corridor and also improve reliability by minimizing conflicts from freight and other passenger traffic operating along the CSX mainline. This alternative seeks to balance the desire to develop new passenger rail service along a freight-free corridor while minimizing impacts to the natural and built environment, and community impacts from right-of-way takings.

Figure 4-8 – Alternative 5 – Passenger Rail, Springfield – Boston: New Rail with Priority Realignments (SPG – WOR), Bus Service West of Springfield

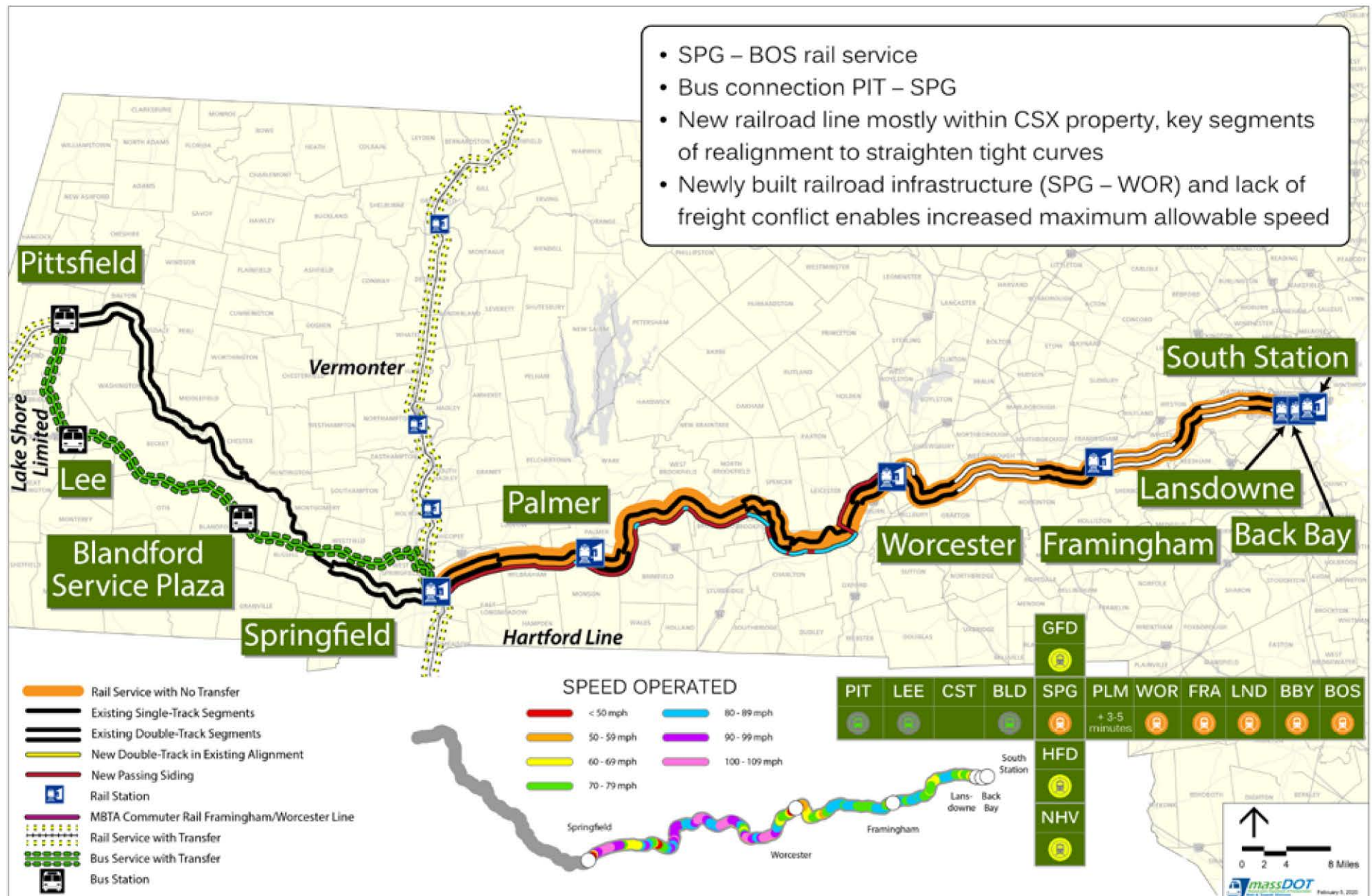
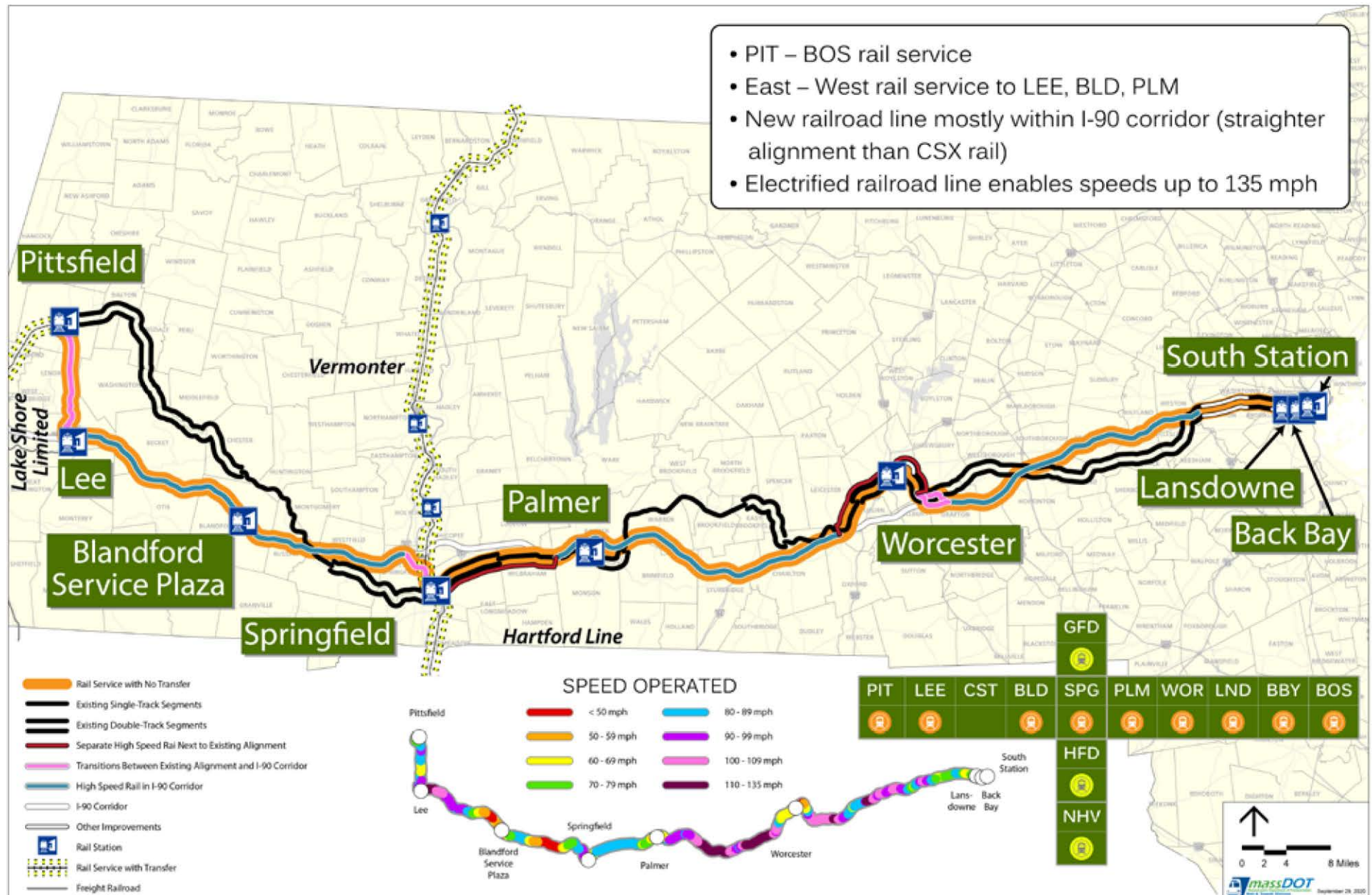


Figure 4-9 – Alternative 6 – High-Speed Passenger Rail, Pittsfield – Boston, with New Rail Alignment in Separate I-90 Corridor



Alternative 6 would follow the Housatonic Railroad between Pittsfield and the I-90 corridor. Between approximately Exit 2 and Route 128/Riverside, the service would run generally along the south side of the I-90 corridor. It would serve new, highway-adjacent rail stations in Lee, Blandford, and Palmer. It would also serve the existing downtown railroad stations in Springfield and Worcester; maintaining service at these downtown rail stations would require the development of new connections between the I-90 rail alignment and the existing railroad corridor. This would entail creation of new passenger-only track in the CSX-owned rail corridor using a separated rail alignment, as in Alternatives 4 and 5. Like the other Preliminary Alternatives, Alternative 6 would operate along the MBTA-owned rail ROW east of Route 128/Riverside.

Between Pittsfield and Springfield, the development of high speed passenger track along the Housatonic and I-90 corridors would allow for a significant rise in maximum permitted speeds from 50 to 150 mph, with trips between Pittsfield and Springfield taking under an hour (0:59). Between Springfield and Worcester, Alternative 6 could enable maximum permitted speeds to increase from 60 to 150 mph, and between Worcester and Route 128/Riverside, maximum permitted speeds could increase from 80 to 150 mph.

Combining the travel time benefits across the segments, journeys between Springfield and South Station would be reduced by nearly half relative to existing conditions (70-minute savings), with travel times under an hour and a half (1:19). Similar travel time benefits would accrue for trips between Pittsfield and South Station, with a 90-minute savings relative to existing conditions and end-to-end travel times under two and a half hours (2:18).

Unlike the other alternatives, which make use of the existing rail corridor

and its infrastructure, Alternative 6 would require installation of a completely new signal system. In addition, modern diesel trainsets can only reach maximum speeds of 125 mph; higher speeds require use of electric locomotives. To adequately leverage the high-speed track proposed, Alternative 6 would require electrification along the corridor, as well as the procurement of electric trainsets.

4.4. Evaluation Criteria

A set of quantifiable metrics was developed to enable the comparative evaluation of the Preliminary Alternatives. These evaluation criteria are based upon the project's purpose and need, study goals, and objectives of the alternatives. The following evaluation criteria capture the key benefits, costs, and impacts of the Preliminary Alternatives.

Ridership

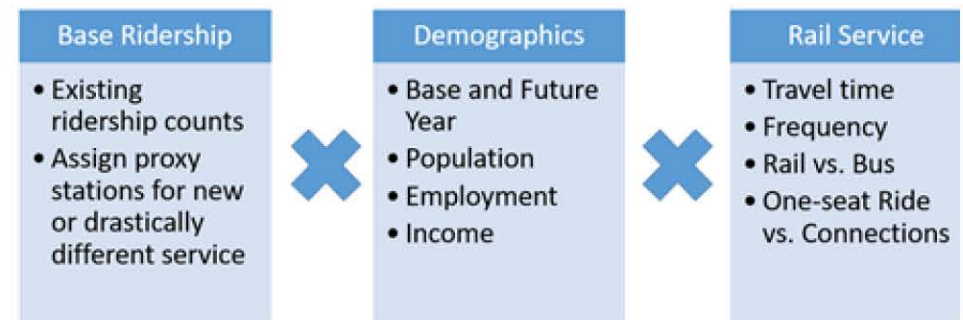
The level of projected ridership is among the most critical metrics for evaluating the total potential benefits of a given alternative. The central goals of the East – West Passenger Rail project are to provide travelers with improved travel options, enable them to better meet their personal travel needs, and realize economic benefits at both the terminating and intermediate station stops from these improved travel opportunities.

- **Modeled Geography & Services.** The evaluation of alternative alignments and project impacts is focused on the corridor that encompasses the East – West communities. However, the ridership forecasting makes use of demographic data and travel behavior information for a broader area that spans all of Massachusetts, Connecticut, and Rhode Island, as well as the New York metro area (New York City, eastern New York State, Long Island, and northern New Jersey). The East – West ridership forecasting model also reflects connections with and competition from the other rail services listed below.

- Amtrak
 - Northeast Regional trains originating in Boston providing service to Providence, New Haven, and New York via the Northeast Corridor, continuing to Washington, D.C.
 - Northeast Regional and Amtrak Shuttles operating on the Hartford Line from Springfield to New Haven via Hartford
 - Lake Shore Limited trains originating in Boston providing service to Springfield, continuing to Chicago, IL
 - Vermonter trains originating in St Albans, VT providing service to Vermont stations, Springfield, Hartford, and New York
- CT*rail* Hartford Line trains operating between Springfield and New Haven
- MBTA Commuter Rail trains operating between Boston and Worcester
- Greyhound and Peter Pan bus services
- **Ridership Forecasting Methodology.** Ridership forecasts for the preliminary alternatives were made using the same rail ridership model that was used for the Northern New England Intercity Rail Initiative (NNEIRI) study. Like the NNEIRI forecasts, this study employs an incremental ridership model that only forecasts rail ridership, as opposed to total travel by all modes. However, the influence of other modes, such as driving, is accounted for within the base ridership levels. The model pivots off of actual ridership counts by correlating origins and destinations (“station pairs”) in the East – West Corridor with a proxy station pair on an existing passenger railroad service that has similar demographic and service characteristics (e.g., distance between stations, market size, trains per day). Train-to-train and bus-to-train connections are explicitly modeled and factored to reflect the lower appeal of a required transfer. Each train is modeled separately, which allows for time-of-day factoring for both departure and arrival times.

Ridership forecasts are unconstrained with regards to train capacity and parking capacity. The potential riders for each Preliminary Alternative are assumed to be drawn from a 20-mile radius around each proposed station, with residents and jobs located closer to the station assumed to have a higher likelihood of using the service. The proxy station pair’s actual ridership counts are then adjusted to account for differences in demographics, market size, and rail service characteristics to make ridership forecasts for the proposed service. Therefore, it is important to ensure that the base railroad service and base station pair are appropriate for forecasting ridership for the proposed service. Figure 4-10 provides an overview of the incremental ridership model.

Figure 4-10 – Incremental Ridership Model Overview



The CT*rail* Hartford Line was initially chosen as the proxy service and proxy station pairs for the Preliminary Alternative ridership forecasts because it is in the same service area that was used as the base for key route segments in the NNEIRI ridership forecasts. The Hartford Line has cities/towns with comparable demographics to East – West stations and also serves one of this study’s major markets – Springfield / Western Massachusetts.

The model was then adjusted to account for the new territory between Pittsfield and Springfield, and the introduction of higher-speed alternatives evaluated in the East-West Study compared to

NNEIRI. After establishing the refined model, calibration runs were undertaken and compared with available NNEIRI forecasts for the common proxy station pairs between Springfield and Boston. The ridership modeling for the Preliminary Alternatives result in East-West ridership forecasts that are slightly higher than the NNEIRI model between the common points.

Members of the Advisory Committee, the public, and other stakeholders questioned that the ridership forecasts for the Preliminary Alternatives seemed too low when compared to actual ridership on other passenger rail services. The ridership forecasts and model were thoroughly reviewed and subsequently adjusted to better reflect the magnitude of the downtown Boston market. The updated model included enhancements to the selected station proxies and an entirely new service /station proxy route to evaluate the potential travel market with a range of modeled attributes.

For the Final Alternatives, two different proxy rail services were used, resulting in two ridership forecasts for each alternative. The Hartford Line was retained as a proxy, but with revised assumptions that enhanced the attractiveness of the East – West service for potential riders to/from Boston. The Downeaster Line rail service, which connects Brunswick, Maine with Boston, was added as a second proxy service for ridership forecasting. As a result, the ridership forecasts for the Final Alternatives were significantly higher than for the Preliminary Alternatives. This is discussed in detail in Section 4.7, Evaluation of Final Alternatives, Ridership.

Costs

The projected costs, both initial capital cost of project implementation and ongoing annual costs of operations and maintenance, are critical metrics for evaluating each Preliminary Alternative.

- **Capital Costs Development.** The capital cost estimates reflect one-time investments in new infrastructure (e.g., new/upgraded stations, track, bridges, yards, utility relocation, signals, including Positive Train Control equipment), as well as the acquisition of any properties intersected by each alignment (including the cost of the property and any required compensation or mitigation activities), vehicle procurement, and professional services.

Table 4-5 on the next page includes a summary of the specific components included within the capital cost estimates, as well as the extent to which they influence the overall cost of the alternatives. The cost components are organized by Standard Cost Category (SCC), which is an approach used by the FRA and Federal Transit Administration (FTA) that allows for reliable comparisons of capital costs across with various elements of different transportation projects. These categories include many elements, but two of them – bridge structures and utility relocations – exert a particularly large influence on the overall project. Relative to NNEIRI, the East – West costs are higher due the use of different assumptions for utility relocations and bridges. The NNEIRI preferred alternative contemplated double-tracking, which was assumed to occur without any utility conflicts or major impacts to existing bridges that could not be addressed simply through rehabilitation efforts. In contrast, Alternatives 4 through 6 contemplate improvements beyond the existing rail corridor (i.e., implementing a separate passenger-only track parallel to existing or along an entirely new rail corridor) that would generate impacts to utility structures and existing bridges. Therefore, this study assumed utility relocations, which experience with other similar projects has shown can be substantial, and that any existing bridge impacted would need to be reconstructed, not rehabilitated.

Table 4-5 – Overview of FRA/FTA Standard Cost Category (SCC) Elements

STANDARD COST CATEGORY (SCC)	SCOPE	DRIVING ELEMENTS
CONSTRUCTION COSTS	Construction, including materials and labor, for all proposed infrastructure elements	Incorporates all cost elements not related to acquisitions and displacements, vehicle procurement, professional services, and unallocated contingency.
10 GUIDEWAY & TRACK ELEMENTS	All track, guideway preparation, and railroad (or undergrade) bridges	There are many existing undergrade bridges, particularly between Springfield and Worcester. These would either need to be replaced to meet current design standards, or, for new alignments, entirely new bridges and bridge approaches.
20 STATIONS, STOPS & TERMINALS	All elements of railroad stations	Serving stations that require a new or significantly rehabilitated facility.
30 SUPPORT FACILITIES	All maintenance and layover facilities, as well as any additional administration buildings, crew quarters, parts storage, or similar elements	Adequate layover facilities are proposed in Pittsfield, Springfield, and/or Boston (expansion of existing), depending on the alternative.
40 SITEWORK & SPECIAL CONDITIONS	Civil, site, and other miscellaneous infrastructure items (e.g., demo, grubbing, mitigation, site roadways, parking lots, and utility relocations)	The quantity of utility relocations and overhead bridge replacements are based on the location, length, and type of new track. Generally, alternatives with higher amounts of new track construction, especially in areas beyond existing ROW, have higher costs.
50 SYSTEMS	Train signalization, traction power systems, roadway signalization, fare collection, and central control and dispatch technologies	Due to the need to supply electrical traction power to achieve the high speeds within Alternative 6, this item is at least five times greater than any other alternative.
CONSTRUCTION CONTINGENCY	Recognizes and sets aside funding to address uncertainties given the current level of design and engineering	35% of construction costs (SCC 10-50), which is common for this high-level conceptual analysis
60 ROW, LAND & EXISTING IMPROVEMENTS	Land acquisition costs, regardless of ROW type, based on SF of impact, as well as relocation assistance for all business and residents whose buildings would be permanently occupied.	Length of new alignment. It should be noted that payments stemming from temporary impacts to private properties that would be experienced during construction are not included in this estimate.
70 VEHICLES	Procurement of the trainsets and buses that would be required to operate the proposed rail and bus frequencies.	Frequency of service proposed. Alternatives 1-5 contemplate diesel-powered trains while Alternative 6 would require fully-electric propulsion systems.
80 PROFESSIONAL SERVICES	General project start-up, including project development, design/ engineering, project and construction management, liability and insurance, legal fees, external agency costs, surveys, testing, etc.	30% of SCC 10-50, including Allocated Contingency, consistent with FRA guidance
90 UNALLOCATED CONTINGENCY	Recognizes that, until construction is finished, uncertainties will remain	10% of SCC 10-80, including Allocated Contingency
100 FINANCE CHARGES	"Cost of capital" that would be associated with bond repayment or other borrowing costs	Given the present level of design and engineering, finance charges were not estimated.

- **Operations & Maintenance Costs.** The operations and maintenance (O&M) costs associated with each preliminary alternative were developed using different assumptions for the rail and bus mode. Based on a review of O&M costs incurred by similar passenger rail services, as well as the level of rail service proposed in each alternative, the rail-based O&M costs include the following components:
 - Labor costs for train crew and equipment maintenance staff;
 - Fuel costs for the trains;
 - Station operations and maintenance cost;
 - Train equipment maintenance costs;
 - Access fees to account for management of the train services (dispatching, policing, supervisory costs, emergencies, etc.)
 - Routine ROW maintenance; and
 - General administrative functions.

The bus-based O&M costs were developed by reviewing 2018 National Transit Database (NTD) O&M cost data for similar commuter bus operations, and then applying an average cost per vehicle revenue hour to the level of bus services proposed in Alternatives 1, 2, and 5.

Environmental and Community Impacts

The Preliminary Alternatives would each cause environmental and community impacts. These include impacts to land associated with potential property takings. These would result in permanent impacts to publicly-held and/or privately-owned properties that either abut the existing rail corridor or lie along a new rail alignment. Determining these impacts requires accounting for appropriate track curvature and grades and adherence to current CSX standards. Based on the infrastructure improvements proposed (e.g., number of new passenger tracks or sidings) and varying assumptions of passenger operations

and corridor ownership (e.g., new shared passenger-freight or passenger-only track in CSX corridor, or new passenger-only track in separate corridor), impact buffers or required right-of-way widths for different segments of track were developed for each of the Preliminary Alternatives.

- **Environmental Impacts.** Each Preliminary Alternative would have environmental impacts from fuel emissions, noise, vibration, and property impacts to natural lands.
 - **Air Quality.** Air quality is regulated and protected by the federal Clean Air Act (CAA) of 1963, federal Clean Air Act Amendment (CAAA) of 1990, the Massachusetts Clean Air Act, and federal and state standards and permit programs administered by the U.S. Environmental Protection Agency and MassDEP. At the federal level, the CAA sets National Ambient Air Quality Standards (NAAQS) for six major “criteria” pollutants: carbon monoxide, lead, nitrogen dioxide, ground-level ozone, sulfur dioxide, and particulate matter. At the state level, the 2008 Massachusetts Global Warming Solutions Act (GWSA) created a framework for reducing heat-trapping greenhouse gas (GHG) emissions to minimize the worst effects of global warming, requiring a 25 percent reduction by 2020 and an 80 percent reduction by 2050 relative to 1990 baseline emission levels. Though the magnitude of the change would vary based on key service characteristics of a new passenger rail service (e.g., travel times, frequency, stations, transfers, relative appeal of other available travel options), changes in air quality would occur across all alternatives because of two factors – increases in rail-based VMT and changes in auto-based VMT from both passenger vehicles and any connecting bus services.
 - **Noise & Vibration.** The FRA and FTA publish technical guidance to evaluate the impacts of transit and railroad noise

and vibration.⁶ These factors have impacts on a general corridor level, as well as on specific sensitive receptors (such as residences, schools, churches, hospitals, and users of uses with vibration-sensitive equipment).

- **Water Resources (Waterways, Wetlands, and Waterbodies).** Surface water and wetlands are protected by the federal Clean Water Act (CWA) and the Massachusetts Wetlands Protection Act (MWPA). Any actions that might have impacts on these resources must adhere to federal and state water quality standards and comply with federal, state, and local permit programs. These programs include CWA Sections 404 and 10 permits administered by the U.S. Army Corps of Engineers, the CWA Section 401 Water Quality Certification administered by the Massachusetts Department of Environmental Protection (MassDEP), and the MWPA, administered by host municipalities. To understand how each Preliminary Alternative would affect river and stream crossings, as well as wetlands and open water (i.e., lakes and ponds) features, MassDEP data was used to identify the number of water crossings and the total area of impact to wetland and waterbodies for each alternative.⁷ The greatest potential for impact to these protected resources is sedimentation and erosion during construction, and to a lesser extent, the potential for spills of fuel or other contaminants associated with construction equipment or operating the service.
- **Floodplains.** Floodplains provide an important function in storing stormwater and protecting people and property

from flood hazards. They are protected by the MWPA, the federal CWA, and the federal Flood Disaster Protection Act. The evaluation of impacts to floodplains assessed the new impervious area that each alternative would create in low-lying and groundwater recharge areas located within federally-designated 100-year floodplains. An assessment was performed using National Flood Hazard and Q3 Flood Zone geospatial data, which was published by the U.S. Federal Emergency Management Authority (FEMA) and retrieved from MassGIS.

- **Areas of Critical Environmental Concern.** The Massachusetts Department of Conservation and Recreation (DCR) administers the Commonwealth's Areas of Critical Environmental Concern (ACEC) program. An ACEC is a place that has received special recognition due to the quality, uniqueness, and significance of its natural and cultural resources. Designation of an ACEC increases environmental oversight and state permitting standards by elevating performance standards and lowering thresholds for review.
- **Protected Species Habitats.** The federal Endangered Species Act and the Massachusetts Endangered Species Act protect rare species and their habitats. An assessment of impacts to areas that foster and nourish these protected species was conducted using geospatial data pertaining to Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species published by the Massachusetts Natural Heritage & Endangered Species Program (NHESP) within the 14th Edition

⁶ *Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123, September 2018; High-Speed Ground Transportation Noise and Vibration Impact Assessment, Report No. DOT/FRA/ORD-12/15, September 2012. The guidance is similar, with the FTA guidance applying to moderate speeds and the FRA guidance applying to speeds greater than 90 miles per hour.*

⁷ *The analysis of rivers (2014 Integrated List of Waters) and permanent/non-intermittent streams (1:25,000 Hydrography) relied on geospatial data provided by MassDEP and published on MassGIS.*

of the Massachusetts Natural Heritage Atlas. Priority Habitats are defined as protected wetland, upland, or marine habitats where state-listed rare species have been observed within the past 25 years. Estimated Habitats contain a subset of Priority Habitats but do not include any rare plant or rare upland-bound wildlife species.

- **Protected Lands.** Using statewide geospatial data for Protected and Recreational Open Spaces, coupled with the impact profile of each Preliminary Alternative, an assessment was conducted to determine the total number of affected resources that are subject to protections under state and/or federal regulations. Since these resources often consist of smaller components, the total number of individual parcels impacted was also determined.

- **Massachusetts Article 97 Lands.** Article 97 of the Amendments to the Massachusetts Constitution protects land that has been acquired by agencies of the Commonwealth for the purposes of conservation or agricultural preservation through either a fee simple acquisition or a conservation easement. Article 97 stipulates that any disposition of a state agency's interests in such lands requires a two-thirds vote of the state legislature for the change to be authorized.
- **Federal Section 4(f) and 6(f) Lands.** Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 governs the use of protected lands and other resources for transportation purposes. This regulation compels USDOT agencies to avoid the use of publicly-owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic properties whenever a "feasible and prudent alternative" exists. When such an option does not exist, Section 4(f) requires these

agencies to incorporate all possible planning (e.g., mitigation measures) to minimize the harm to those properties that would otherwise result from the proposed transportation use. Section 6(f) of the federal Land and Water Conservation Fund (LWCF) Act protects public outdoor recreation areas that have been purchased or improved using LWCF funding. Section 6(f) requires approval from the Secretary of the Interior, acting through the National Park Service, to convert such land to another use. Such conversion typically requires replacement of the land and/or improvements.

- **Community Impacts.** Community impacts result from property taking that affects public or private property.
 - **Cultural Resources & Historic Properties.** Historic, archaeological, and tribal resources are protected by the National Historic Preservation Act and local historic bylaws. Each Preliminary Alternative's potential impacts to national and local historic properties (which include districts, properties, building and archaeological sites) was assessed using geospatial data developed by the Massachusetts Historical Commission (MHC) within its statewide Cultural Resource Information System (MACRIS).
 - **Transportation Infrastructure.** The Preliminary Alternatives also have impacts on existing transportation infrastructure, in particular roadways that cross the railroad alignment, either at-grade or in a grade-separated profile above or below the railroad.
 - **At-Grade Crossing Warning/Safety Systems.** At-grade crossings are the only legal intersections where trains have the potential to conflict with other traffic streams (e.g., automobiles, pedestrians). Since collisions at these facilities can result in serious injuries or death, ensuring

safe and protected passage for both train and person traffic alike is important. While a certain level of risk always exists wherever there is the potential for fast-moving trains weighing several hundred tons to collide with lighter objects, appropriate design measures and proactive steps can be taken to mitigate such risk when a substantial change in train volumes and/or speeds along the corridor occurs. The FRA Railroad Crossings Inventory database and a follow-up visual scan of recent aerial imagery were used to determine the count and location of all at-grade crossings along the existing rail corridor.

- **Bridges.** The National Bridge Inventory database was paired with recent aerial imagery to determine how each alternative would interface with existing overhead (e.g., highway overpass) and undergrade (e.g., river or stream crossing) bridge structures along the existing rail corridor. For alternatives that develop a new alignment in an entirely different corridor, at-grade crossings were identified by reviewing aerial imagery and noting intersections between the proposed alignment and all existing roadways (public and private) and railroads.
- **Property and Buildings.** Some of the Preliminary Alternatives have alignments that would have impacts to buildings in developed areas. All review and evaluation of railroad alignment impacts to ROW, property, and buildings relied on the use of publicly-available GIS parcel and assessors' data. As a result, the findings presented would be subject to refinement based on detailed geospatial survey that would be required for project design and engineering.

4.5. Evaluation of Preliminary Alternatives

The six Preliminary Alternatives have been evaluated to determine the benefits, costs, and impacts that are expected to result from each set of service and infrastructure improvements for enhanced passenger rail service between Boston, Springfield, and Pittsfield. The key metrics evaluated are projected ridership, environmental and community impacts, and costs (both capital costs and operating/maintenance costs).

Ridership

The ridership is the central metric that represents the benefits offered by each of the Preliminary Alternatives. Table 4-6 on the following page provides the annual one-way boardings utilizing the original forecasting model in 2040 for each Preliminary Alternative, broken down at a station-level, along with projected changes in auto- and rail-based vehicle miles traveled (VMT) in the year 2040.

Note: "One-way boardings" measures passenger ridership based on a single direction of travel. For instance, a round trip between Springfield and Boston, with the rider boarding an East-West train both times, is counted as two (2) one-way boardings (one in Springfield, one in Boston). The following is a summary of the key takeaways from the ridership forecasts.

- In general, the level of infrastructure investment, travel speed, and service frequency increase as one progresses through the Preliminary Alternatives, from Alternative 1 to Alternative 6. The projected ridership generally increases in tandem with increases in these other parameters.
- The exception to this trend is Alternative 4 versus Alternative 5. Alternative 4 has higher ridership, which is attributable to the fact that it provides direct rail service for Pittsfield and destinations west

Table 4-6 – Ridership Results (Preliminary Alternatives) – 2040 Annual One-Way Boardings and Change in Vehicle Miles Traveled

METRIC /	ALTERNATIVE	1	2	3	4	5	6
STATION	TYPE	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
PITTSFIELD	DIRECT ACCESS	2,000	2,150	6,400	9,950	7,150	21,500
LEE	DIRECT ACCESS	200	400	--	--	1,950	5,200
CHESTER	DIRECT ACCESS	--		950	1,600	--	--
BLANDFORD	DIRECT ACCESS	400	400	--	--	1,850	4,950
SPRINGFIELD	TRANSFERS (HARTFORD LINE)	650	3,950	5,100	5,300	6,500	9,950
SPRINGFIELD	DIRECT ACCESS	2,300	11,650	16,750	28,750	29,300	53,650
PALMER	DIRECT ACCESS	450	2,950	3,900	6,700	-	11,150
WORCESTER	TRANSFERS (MBTA)	1,950	2,850	5,150	5,800	6,700	12,650
WORCESTER	DIRECT ACCESS	1,900	9,700	13,000	22,650	23,950	49,850
FRAMINGHAM	LAKE SHORE LIMITED	100	750	700	700	650	950
BOSTON, BACK BAY & LANSLOWNE	DIRECT ACCESS	1,200	13,200	20,300	35,650	37,000	77,850
ALL STATIONS	TOTAL ONE-WAY BOARDINGS	11,150	48,000	72,250	117,100	115,050	247,700
ALL STATIONS	ANNUAL VMT CHANGE – AUTO	(303,819)	(1,861,523)	(3,169,632)	(5,164,066)	(5,230,464)	(11,535,774)
ALL STATIONS	ANNUAL VMT CHANGE – RAIL	129,600	300,000	538,800	656,400	529,200	1,321,200

- of Springfield, while Alternative 5 requires a bus connection.
- Direct, one-seat rail service is more convenient, generally faster, and more attractive to riders than a trip that requires transfers and a bus component. This preference can be seen among Pittsfield—Springfield projections between the alternatives.
- Aside from Boston, Springfield generates the majority of East – West ridership for all alternatives, accounting for the following percentage of riders:
 - Alternative 1 52.9 %
 - Alternative 2 65.0 %
 - Alternative 3 60.5 %
 - Alternative 4 58.2 %
 - Alternative 5 62.2 %
 - Alternative 6 51.4 %
- As noted in Section 4.4, Evaluation Criteria, the ridership forecasts for the Preliminary Alternatives were subsequently revised for the Final Alternatives (see Table 4-15 on page 82). However, the forecasts for the Preliminary Alternatives are still useful for evaluating the relative attractiveness of each alternative.

Costs

Each of the major capital spending categories (e.g., guideway, stations, land, vehicles) was reviewed in Table 4-5 on page 57. Table 4-7 shows

the capital costs associated with each Preliminary Alternative, along with the total capital costs by geographic segment and annual O&M costs for all rail and bus services proposed.

Table 4-7 – Summary Capital cost by Standard Cost Category (SCC) and Segment, and Annual Operations & Maintenance Costs (2020 Million Dollars)

METRIC /	ALTERNATIVE	1	2	3	4	5	6
COST BASIS	TYPE	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
CAPITAL BY STANDARD	10 GUIDEWAY & TRACK ELEMENTS	\$474.722	\$474.722	\$631.487	\$972.301	\$1,312.215	\$8,774.271
CAPITAL BY STANDARD	20 STATIONS, STOPS, TERMINALS	\$21.373	\$21.373	\$24.720	\$28.325	\$12.618	\$69.422
CAPITAL BY STANDARD	30 SUPPORT FACILITIES	\$18.540	\$18.540	\$31.930	\$31.930	\$18.540	\$31.930
CAPITAL BY STANDARD	40 SITEWORK & SPECIAL CONDITIONS	\$449.656	\$449.656	\$619.524	\$1,059.032	\$1,140.416	\$3,604.780
CAPITAL BY STANDARD	50 SYSTEMS	\$27.980	\$27.980	\$75.974	\$91.628	\$78.432	\$445.461
CAPITAL BY STANDARD	CONSTRUCTION SUBTOTAL (10-50)	\$992.270	\$992.270	\$1,383.635	\$2,183.216	\$2,562.221	\$12,925.864
CAPITAL BY STANDARD	CONSTRUCTION CONTINGENCY (35%)	\$347.295	\$347.295	\$484.272	\$764.126	\$896.777	\$4,524.052
CAPITAL BY STANDARD	CONSTRUCTION TOTAL	\$1,339.565	\$1,339.565	\$1,867.907	\$2,947.342	\$3,458.999	\$17,449.916
CAPITAL BY STANDARD	60 ROW, LAND, EXISTING IMPROVEMENTS	\$12.198	\$12.198	\$16.605	\$41.645	\$37.538	\$101.402
CAPITAL BY STANDARD	70 VEHICLES	\$20.909	\$142.398	\$131.840	\$155.736	\$82.194	\$370.800
CAPITAL BY STANDARD	80 PROFESSIONAL SERVICES (30%)	\$401.869	\$401.869	\$560.372	\$884.203	\$1,037.700	\$5,234.975
CAPITAL BY STANDARD	SUBTOTAL (10-80)	\$1,774.541	\$1,896.029	\$2,576.723	\$4,028.925	\$4,616.430	\$23,157.094
CAPITAL BY STANDARD	90 UNALLOCATED CONTINGENCY (10%)	\$177.454	\$189.603	\$257.672	\$402.892	\$461.643	\$2,315.709
CAPITAL BY STANDARD	100 FINANCE CHARGES	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
CAPITAL BY STANDARD	TOTAL PROJECT COST (10-100)	\$1,951.995	\$2,085.632	\$2,834.396	\$4,431.817	\$5,078.073	\$25,472.803
CAPITAL BY SEGMENT	PIT-SPG	\$17.399	\$17.399	\$649.493	\$652.262	\$17.399	\$7,166.684
CAPITAL BY SEGMENT	SPG-WOR	\$1,924.316	\$2,057.954	\$2,120.686	\$3,715.339	\$4,996.458	\$11,620.694
CAPITAL BY SEGMENT	WOR-BOS	\$10.280	\$10.280	\$64.216	\$64.216	\$64.216	\$6,685.425
ANNUAL O&M BY MODE	RAIL	\$26.162	\$40.891	\$51.603	\$65.714	\$47.380	\$86.108
ANNUAL O&M BY MODE	BUS	\$1.203	\$0.933	\$0.000	\$0.000	\$1.629	\$0.000
ANNUAL O&M BY MODE	TOTAL	\$27.365	\$41.824	\$51.603	\$65.714	\$49.009	\$86.108

These detailed capital cost estimates have been developed using geographically-accurate railroad alignment plans to estimate quantities for project construction, along with costs for these quantities that are based on a range of industry-standard cost information. These cost assumptions are based on actual construction costs for comparable projects that have been recently built in New England, with a heavy emphasis on Massachusetts projects.

- Capital costs generally increase as the infrastructure investments and impacts increase progressively across the Preliminary Alternatives.
- The project elements that entail the greatest costs are for railroad bridges and for utility reconstruction.
- For each Preliminary Alternative, the greatest infrastructure and cost is associated with the Springfield – Worcester segment.

Operations and maintenance costs are principally determined by the number of vehicle-miles and vehicle-hours. Therefore, O&M costs increase with length of service and frequency of service. O&M costs increase across the Preliminary Alternatives in unison with increases in train frequency.

Environmental and Community Impacts

Most of the environmental and community impacts of the Preliminary Alternatives result from the alignment of the railroad tracks proposed, and their impacts to land resources.

- **Existing Alignment in a Shared Corridor.** The railroad track construction requirements for Alternatives 1 through 3 would entail restoration of missing double-track rail segments between Springfield and Worcester, as well as between Pittsfield and Springfield in Alternatives 3. These alternatives would provide a continuous two-track, shared passenger-freight rail alignment, with an impact width of 27 feet wide to the north or south of the existing

single-track segment, depending on the location of the missing double-track.

- **Separate Alignment in a Shared Corridor.** Between Springfield and Worcester, Alternatives 4 and 5 would provide an entirely new, passenger-only rail alignment that is principally within the existing CSX rail corridor, but fully separated from the existing shared passenger – freight rail alignment. This passenger-only alignment would provide a single-track rail line, with frequent passing sidings to accommodate two-way traffic. It would entail an impact width of 50 feet (63 feet for the segments with sidings) to the north or south of the adjacent existing track segment's centerline. Alternative 4 would rely upon restoration of missing double-track rail segments between Pittsfield and Springfield.
- **New Rail Alignment in a Separate Corridor.** For most of the Alternative 6 alignment, passenger rail service would operate on a new double-track, passenger-only rail line within or adjacent to either the I-90 corridor, the Housatonic Rail Corridor, or a transition corridor that connects these new corridors to the existing rail corridor. The impact area for most of the Alternative 6 alignment would be 83 feet wide, to accommodate the two tracks, catenary, and any grading or drainage features.

The improvements proposed for Alternatives 1 through 3 would primarily fall within the existing railroad ROW, so they would have lower community impacts. The introduction of new separate passenger-only track segments and sidings in Alternatives 4 and 5 would increase these impacts, while Alternative 6's use of an entirely different corridor to build a high-speed service would result in much greater impacts to properties outside the transportation corridor. Table 4-8 on the following page shows the impact buffer width associated for the Preliminary Alternatives, which, along with the general location of the alignment, is a key determinant of the impacts presented.

Table 4-8 – Impact Buffer / Required Right-of-Way Based on Passenger Train Speeds and Corridor Ownership

CORRIDOR TYPE + ALIGNMENT	PRELIMINARY ALTERNATIVE	CORRIDOR OWNER	MAX. PERMITTED PASSENGER SPEED (MPH)	NEW PASSENGER TRACKS	NEW SIDINGS	IMPACT BUFFER / RIGHT-OF-WAY (FT)
SHARED + EXISTING	1, 2 & 3	CSX	80-90	1	0	27
SHARED + SEPARATE	4, 5 & 6	CSX	90-110	1	0	50
SHARED + SEPARATE	4, 5 & 6	CSX	90-110	1	1	63
SEPARATE + NEW	6	MassDOT	150	2	0	83

- **Environmental Impacts.** Total environmental impacts by resource area for each Preliminary Alternative are provided in Table 4-9 on the next page.
 - **Water Resources (Waterways, Wetlands, and Open Water Features)**
 - Alternatives 1 through 3 would entail the same alignment between Springfield and Worcester – utilizing the existing rail alignment with the most limited improvement profile – so they would have the fewest and shortest-running impacts to rivers and streams, with a total of 36 crossings. Along this central segment, these alternatives would traverse a total of 10 unique wetland resources totaling 0.4 acres and four open water bodies totaling 0.7 acres
 - The restoration of double-track along the western segment Alternatives 3 and 4 would also affect another seven waterbodies, two wetland areas, and one waterbody between Pittsfield and Springfield.
 - Between Springfield and Worcester, Alternatives 4 and 5 would each affect 41 rivers or streams; however, Alternative 5 would introduce further impacts to one additional wetlands resource at 1.14 acres (59 total resources) and 17 open water features (31 total resources) beyond Alternative 4.
 - **Floodplains**
 - Because Alternative 6 would entail construction of an entirely new rail alignment it would affect 101 crossings, 188 wetland areas (nearly 50 acres), and 23 open water features (over 10 acres).
 - The narrow and relatively limited extent of improvements proposed for Alternatives 1 and 2 would result in the lowest impacts, with 24 floodplain encroachments across nearly 13 acres.
 - Implementation of double-track between Pittsfield and Springfield would result in 19 encroachments covering 6.67 acres under Alternatives 3 and 4.
 - Along the Springfield – Worcester segment, Alternative 4's implementation of a parallel passenger-only track would result in 34 additional encroachments (58 total) and over 16 more acres (28.95 total) relative to Alternative 3.
 - The realignments included in Alternative 5 would touch another seven floodplain zones (65 total) to impact an additional 2.12 acres (31.07 total).
 - Although Alternative 6 would have the highest floodplain impacts, with 103 encroachments totaling nearly 112 acres, most of these impacts would be in the Pittsfield – Springfield and Worcester – Boston segments.

Table 4-9 – Environmental Impacts (Preliminary Alternatives)

	ALTERNATIVE	1 & 2	3	4	5	6
IMPACT TYPE	METRIC	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
WATER CROSSINGS	COUNT	36	43	48	41	101
WETLANDS	COUNT	10	12	60	59	188
WETLANDS	TOTAL AREA (ACRES)	0.43	0.45	7.73	8.85	49.69
OPEN WATER	COUNT	4	5	15	31	23
OPEN WATER	TOTAL AREA (ACRES)	0.72	0.93	4.02	4.69	12.88
100-YEAR FLOODPLAINS	COUNT	24	43	77	65	103
100-YEAR FLOODPLAINS	TOTAL AREA (ACRES)	12.65	19.32	35.63	31.07	111.86
ACEC	COUNT	0	0	0	0	3
ACEC	TOTAL AREA (ACRES)	0	0	0	0	106.73
ARTICLE 97 LANDS	COUNT (RESOURCES)	3	5	9	9	29
ARTICLE 97 LANDS	TOTAL AREA (ACRES)	0.06	3.03	9.87	11.61	62.34
PRIORITY HABITAT	COUNT	6	8	13	21	15
PRIORITY HABITAT	TOTAL AREA (ACRES)	20.07	35.79	58.57	43.29	78.14

- The highest impacts to floodplain areas would be located along the Springfield – Worcester segment for all alternatives except for Alternative 6.
- Along the Pittsfield – Springfield segment, Alternatives 3 and 4 would result in 19 encroachments while Alternative 6 would require 37. Aside from the central segment, floodplain impacts within the eastern and western segments of Alternative 6 would total just under 100 acres, a level of impact that would be higher than any other Preliminary Alternative assessed.

○ **Areas of Critical Environmental Concern**

- Only Alternative 6 would involve impacts to ACECs. Of approximately 107 acres of ACEC impacts, nearly three-

quarters of this area is concentrated between Pittsfield and Springfield where the alignment would run near the Upper Housatonic River (Lenox, Lee & Pittsfield). The remaining quarter of Alternative 6's ACEC impacts would occur along the Worcester – Boston segment due to Cedar Swamp (Hopkinton) and the Miscoe, Warren and Whitehall Watershed (Westborough, Upton & Grafton).

○ **Protected Lands**

- **Article 97.** The number of Article 97 protected recreational and open space properties impacted would range from a minimum of three facilities, with an impact area less than 0.06 acres across four parcels (Alternatives 1 and 2), to a maximum of 29 facilities

encompassing over 62 acres across 43 parcels (Alternative 6).

- **Section 4(f).** Most of the open space and recreational resources protected by Article 97 would also be subject to federal Section 4(f) protection.
 - Alternatives 1 through 3 would have minimal impacts to Section 4(f) protected recreational and open space properties.
 - Alternatives 3 and 4 would affect two Article 97-listed properties between Pittsfield and Springfield for just under three acres of impact across four parcels, primarily the Tekoa Mountain Wildlife Management Area (WMA) in Russell (2.96 acres) but also a small portion of the Chester-Blandford State Forest in Chester.
 - Alternatives 4 and 5 would entail an order of magnitude increase in impacts along the central segment compared to Alternative 3 (three resources at 0.06 acres), with the impacted area under Alternative 4 growing by a factor of over 100 (seven resources covering 6.90 acres) and Alternative 5 nearly doubling that expanded area (nine resources at 11.61 acres).
 - Alternative 6 is the only option that would introduce impacts to protected recreational and open space resources between Worcester and Boston (16 resources totaling 12.21 acres). Unlike Alternatives 4 and 5, which have the majority of their impacts along the central segment, the majority of the impacts under Alternative 6 would occur along the western segment where it would affect nine resources totaling 46.88 acres.

- **Section 6(f).** None of the open space resources that would be impacted were funded through the federal Land and Water Conservation Fund. Therefore, lands impacted would be protected under Section 6(f).

○ **Protected Species Habitats**

- Implementation of double-track between Pittsfield and Springfield within Alternatives 3 and 4 would result in nearly 16 additional acres of impact across two priority habitats located along the western segment compared to Alternatives 1, 2, and 5.
- Along the central segment, Alternatives 1 through 3 would result in the lowest impacts to priority habitats (six habitats affected totaling just over 20 acres).
- Implementing the passenger-only track between Springfield and Worcester in Alternative 4 would increase impacts by five resources (11 total) and 23 acres along the central segment relative to Alternative 3.
- Compared to the other preliminary build alternatives, Alternative 6's use of the I-90 corridor would generate higher impacts to priority habitat impacts along all segments except for Springfield-Worcester, where this option would present the lowest impacts.
- Alternative 6 has the highest impacts on protected species habitat. Using the Housatonic Rail Corridor would result in the highest segment-level impacts (11 priority habitats totaling nearly 53 acres between Pittsfield and Springfield) across all alternatives. Developing a new corridor between Worcester and Route 128/Riverside would result in nearly 13 acres of priority habitat impacts.

○ **Air Quality**

- As the projected ridership increases through the progression of Preliminary Alternatives, automobile

vehicle-miles traveled (VMT) correspondingly decrease.

- However, because modern automobiles have low “criteria” emissions (e.g. sulfur and nitrogen oxides) while diesel locomotives have relatively high levels of such emissions, all Preliminary Alternatives would produce a net increase in these emissions.⁸
- Alternatives 1, 2, and 5 terminate at Springfield rather than Pittsfield, so they produce lower train-based diesel emissions than other alternatives.
- Alternatives 1, 2, and 5 provide bus connections in Pittsfield, Lee, Blandford, and Springfield that balance the ridership and automobile VMT impacts of terminating rail at Springfield.

○ Noise & Vibration

- Overall exposure to noise increases with both speed and frequency of service. Within the existing CSX corridor east of Springfield, relative noise impacts tend to increase as one moves from Alternative 1 to Alternative 5.
- Longer routes affect a greater number of noise sensitive receptors (more opportunity for exposure) and more noise sensitive receptors fall within urban and densely-developed suburban locations than in rural and less densely-developed suburban areas. Alternatives with direct rail connections to Pittsfield would have greater absolute impacts than those that terminate in Springfield.
- The same incremental increase in noise may be

considered a “significant” impact where there is a high level of existing noise (urban setting), and not be considered “significant” in an area with a low level of existing noise (rural setting).⁹

- The Alternative 5 realignments would present relatively higher noise impacts because the additional noise would occur outside of an established transportation corridor.
- For most of its length, Alternative 6 would introduce an additional noise source along an established transportation corridor (I-90). However, in areas where the alignment transitions between I-90 and the existing rail corridor to serve downtown stations in Springfield and Worcester, Alternative 6 would present noise impacts of a similar nature to Alternative 5’s realignments.

- **Community Impacts.** Table 4-10 on the next page summarizes community impacts by resource area for each Preliminary Alternative.

- **Cultural Resources & Historic Properties.** Historic properties and historic districts are subject to historic protections by virtue of being listed on the federal National Register of Historic Places.

- Alternative 6 would generate impacts to the highest number of historic sites (five) while the central segment between Springfield and Worcester would contain the highest concentration of impacted historic sites (up to three in any alternative).

⁸ Since simulating electrified train operations is not supported within TREDIS, emissions results for Alternative 6 reflect the worst-case scenario (i.e., a diesel-based service operating 17 new weekday round trips per day).

⁹ Because sound is expressed on a logarithmic scale in decibels (dB), a doubling of the number of identical noise sources increases noise levels by only 3 dBA; thus, two noise sources each emitting a noise level of 50 dBA yield a combined noise level of 53 dBA. A tenfold increase in the number of identical noise sources will add 10 dBA to the overall noise level (i.e., 60 dBA combined).

Table 4-10 – Community Impacts (Preliminary Alternatives)

	ALTERNATIVE	1	2	3	4	5	6
IMPACT TYPE	METRIC	SHARED + EXISTING	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE	SEPARATE + NEW
2040 ANNUAL CHANGE IN VMT	AUTO	(303,819)	(1,861,523)	(3,169,632)	(5,164,066)	(5,230,464)	(11,535,774)
2040 ANNUAL CHANGE IN VMT	RAIL	129,600	300,000	538,800	656,400	529,200	1,321,200
HISTORIC SITES	COUNT	1	1	2	3	2	5
HISTORIC PROPERTIES	COUNT	1	1	2	5	4	9
HISTORIC PROPERTIES	TOTAL AREA (ACRES)	2.05	2.05	4.01	6.77	4.66	8.17
TRANSPORTATION INFRASTRUCTURE	IMPROVED AT-GRADE CROSSING	0	0	30	30	11	4
TRANSPORTATION INFRASTRUCTURE	UNDERGRADE BRIDGES (FT)	5,300	5,300	6,800	10,670	16,370	114,338
TRANSPORTATION INFRASTRUCTURE	OVERHEAD BRIDGES	20	20	25	42	37	9

Note: Negative values reflect a decrease in VMT or emissions for a given mode/alternative.

- Between Pittsfield and Springfield, three sites listed on the National Register would be impacted. Alternatives 3 and 4 would intersect a historic Boston & Albany (B&A) Railroad bridge near Basket Street in Huntington, while Alternative 6 would two historic properties in this segment.
- Within the central segment between Springfield and Worcester, seven unique National Register sites would be impacted by one or more alternatives. Alternatives 1 through 3 would impact another historic B&A bridge in West Brookfield. Alternative 4 would impact two historic properties, while Alternative 5 would impact these two and one additional property. Alternative 6 would impact one historic building, as well as two sites along the Providence & Worcester (P&W) Railroad in Worcester, an embankment and a bridge.
- As with historic sites, Alternative 6 would result in impacts to the highest number of historic districts (nine); however, most of the districts impacted under Alternative 6 lie within the Worcester to Boston segment (six), which would not be impacted under any other alternatives.
- Between Pittsfield and Springfield, two historic districts would be impacted. Alternatives 3 and 4 would intersect with the Huntington Village Historic Commercial District, while Alternative 6 would impact the Eaton, Crane and Pike Company Factory industrial complex in Pittsfield.
- Within the central segment, there are three unique historic districts that would be affected. Alternatives 1 through 5 would result in varying degrees of impact to the West Brookfield Center Historic Commercial District. Under Alternatives 4 through 6, two other districts would be affected – the Downtown Springfield Railroad District and the Holy Name of Jesus Complex in Worcester.
- As the Preliminary Alternatives contemplate an increase in passenger trains moving near or through these historic pedestrian-oriented areas, ensuring safe mobility for all may require safety improvements at potential

intersections, such as installing new active warning devices at at-grade crossings where such measures do not currently exist.

- **Transportation Infrastructure**

- **At-Grade Crossing Warning/Safety Systems**

- These junctions are the site of potential conflicts between new East-West trains and other forms of traffic moving along the public ROW. As the frequency and speed of new passenger trains along the Corridor increases, the need for enhanced protective equipment to strongly reinforce safe train, automobile, and pedestrian behavior also increases.
 - Based on the relatively modest level of increase in train volumes and scheduled speeds, capital funding to support a large at-grade crossing enhancement program was not included in Alternatives 1 and 2. However, this approach was predicated on the notion that, as any project advances further into design, a detailed engineering analysis of each at-grade crossing would be undertaken to determine exactly what types of improvements would be necessary.
 - As train speed and service frequency increase, Alternatives 3 through 6 would require modifications to existing at-grade crossings to ensure safe passenger rail operations while achieving higher speeds.
 - Of the 38 at-grade crossings along the existing rail corridor, Alternatives 3 and 4 would implement improvements at 30 crossings, including 18 locations along the western segment and four between Springfield and Worcester. Alternatives 3 through 5 each propose improvements to the same eight

at-grade crossings located between Worcester and Boston.

- Along the Springfield to Worcester segment, Alternative 5 would require improvements at a total of 11 crossings.
 - Alternative 6 would require grade crossing improvements along the “shared” segments that would run parallel to the existing CSX alignment connecting with downtown stations in Springfield and Worcester.

- **Bridges**

- Each Preliminary Alternative would entail rehabilitation or construction of undergrade or overhead bridges along the proposed rail alignment.
 - Most of the undergrade bridge impacts for each Preliminary Alternative would occur between Springfield and Worcester. In this segment, the development of a separate passenger-only track would result in substantially higher undergrade bridge impacts than simply restoring the double-track.
 - » Alternatives 3 and 4 include 0.22 miles of undergrade bridge impacts within the western segment while Alternative 6 would generate 7.24 miles.
 - » Alternative 6 has long segments of elevated rail viaduct, resulting in the fewest impacts to overhead bridges (nine).
 - » While the restoration of double-track between Pittsfield and Springfield would affect five overhead bridges in Alternatives 3 and 4, Alternative 6’s alignment would only impact one bridge along the western segment.

- » The use of a new corridor for passenger rail service between Worcester and Route 128/Riverside would cause impacts to six existing overhead bridges in Alternative 6.

○ **Property and Building Impacts**

- Property impacts range from a minimum of 72 parcels across 124 acres under Alternatives 1 and 2 to a maximum of 1,202 parcels covering over 1,300 acres in Alternative 6.
- The Pittsfield-Springfield segment in Alternatives 3 and 4 would generate impacts to 28 properties over nearly 45 acres while Alternative 6's alignment would result in 518 acres of total impact.
- Compared to Alternative 3 (72 parcels at 123.6 acres), property impacts between Springfield and Worcester under the shared corridor, separate track alternatives would be much higher, with Alternative 4 carrying 531 parcels at 329.2 acres and Alternative 5 touching 486 parcels at 319.9 acres.
- Alternative 6 impacts the most parcels, as it has the largest footprint outside an established transportation corridor, and has several transition segments that are not adjacent to existing transportation ROW. This includes sections in West Springfield, Lee, Springfield, and Millbury, where it connects to the existing rail line from the Turnpike alignment.
- Preliminary Alternatives 1 through 3 entail only the restoration of missing double-track segments and development of new passing sidings, which would not result in any direct impacts to existing buildings.
- For Alternatives 4 through 6, the magnitude of the building impacts parallels the parcel impacts, with the

alternatives that would have greater parcel impacts having correspondingly higher building impacts. These building impacts are concentrated in older built-up areas around Pittsfield, Springfield, Palmer, Warren, and Worcester. This is especially true in Springfield and Worcester, where all the alternatives are adjacent to the existing track and where industrial development has historically been located near the railroad.

- Alternative 6 is the only Preliminary Alternative that would have building impacts west of Springfield and east of Worcester.

4.6. Final Alternatives

The Preliminary Alternatives and the results of the alternatives evaluation were presented to the Advisory Committee, East – West Corridor stakeholders, and members of the public at the series of meetings held in 2019 and 2020. The feedback and priorities from these study participants, which were central to developing the three Final Alternatives, are summarized below.

- Strong opposition to a bus service for communities west of Springfield
 - Bus service is not an acceptable substitute to new rail connections along any part of the Corridor
 - Alternatives that do not serve Pittsfield and other towns west of Springfield are not acceptable
- Direct rail service to smaller corridor communities (e.g., Chester and Palmer) is important
- Preference for fast and frequent service
- Desire to launch the service as soon as possible
- Re-examine ridership forecasts and methodologies and to include any modifications in the Final Alternatives

As a result of the consensus opposition to bus service west of Springfield, Alternatives 1, 2, and 5 were eliminated from consideration for the Final Alternatives.

Further, Advisory Committee members, residents, and stakeholders expressed a preference for Final Alternatives that make use of the Boston – Albany rail corridor. Although Alternative 6 would deliver higher speeds and more than twice as many boardings as Alternatives 4 and 5, implementing a new electrified rail line would entail capital spending that is more than five times greater than the next costliest alternative (Alternative 5). In addition, this alternative would also generate land-based environmental and community impacts that would typically be two to three times as high as Alternative 4. Relative to other Preliminary Alternatives, Alternative 6 would require a greater level of effort and coordination to secure any federal, state, and local permits that may be necessary to advance the project. Given the much greater increase in cost and impacts relative to the increase in benefits, Alternative 6 was not advanced for further evaluation.

Advancing the Final Alternatives

The three Final Alternatives evaluated in the second phase of alternatives analysis all have the following characteristics:

- Rail operations for the full East – West Corridor, from Pittsfield to Boston, via the Boston – Albany railroad mainline.
- Service to all stations in the Corridor, including the smaller intermediate communities: Pittsfield, Chester, Springfield, Palmer, Worcester, Lansdowne, Back Bay, and South Station.

The Final Alternatives comprise:

- Final Alternative 3 (same as Preliminary Alternative 3)
- Final Alternative 4 (same as Preliminary Alternative 4)
- A new hybrid alternative – Final Alternative 4/5 – that combines

elements of Preliminary Alternative 4 (i.e. rail service to the Pittsfield – Springfield segment, service to all stations) with elements of Preliminary Alternative 5 (i.e. additional travel time savings along the Springfield – Worcester segment)

The resulting three Final Alternatives have the same alignment and infrastructure improvements for two out of three major Corridor segments: Pittsfield – Springfield and Worcester – Boston. The three Final Alternatives have capital costs, environmental impacts, and community impacts that are identical for these segments.

Therefore, when comparing the Final Alternatives, any change in cost or land-based environmental and community impacts is due to the use of a different infrastructure approach along the central Springfield – Worcester segment. Although ridership is tied to service frequency, which varies among Alternative 3 (seven new weekday round trips) and Alternatives 4 and 4/5 (nine new weekday round trips), travel times are another key influencing factor and they are also based on the alignments and infrastructure proposed for each Final Alternative.

On the next page, Table 4-11 provides an overview of the key service characteristics for each of the Final Alternatives, while Table 4-12 (page 74) shows average travel times to/from Boston, along with key service and maintenance assumptions.

Final Alternatives 3 and 4 were described in detail in Section 4.3, Preliminary Alternatives. A small number of refinements were made to the Preliminary Alternative capital costs, environmental and community impacts and incorporated into the Final Alternatives. For convenience and ease of comparison, the summary graphics are re-presented on pages 75 and 76 for Alternatives 3 and 4. The new Final Alternative, Alternative 4/5, is described and similarly summarized beginning on page 78.

Table 4-11 – Passenger Rail Service Characteristics and Scheduled Travel Times (Final Alternatives)

METRIC /	ALTERNATIVE	EXISTING	3	4	4/5 HYBRID
CORRIDOR TYPE	ALIGNMENT	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
FREQUENCY	RAIL ROUND TRIPS	1	8	10	10
PITTSFIELD – BOSTON	AVERAGE END-TO-END SPEED (MPH)	39.3	47.8	50.5	53.5
PITTSFIELD – BOSTON	END-TO-END TRAVEL TIME RANGE	3:50	3:05 – 3:20	2:55 – 3:10	2:45 – 3:00
SPRINGFIELD – BOSTON	AVERAGE END-TO-END SPEED (MPH)	39.9	50.4	55.1	60.8
SPRINGFIELD – BOSTON	END-TO-END TRAVEL TIME RANGE	2:28	1:50 – 2:05	1:40 – 1:55	1:30 – 1:45
TRAVEL TIME (BOSTON)+	PITTSFIELD	3:50	3:09	2:59	2:49
TRAVEL TIME (BOSTON)+	LEE	-	-	-	-
TRAVEL TIME (BOSTON)+	CHESTER	-	2:38	2:28	2:18
TRAVEL TIME (BOSTON)+	BLANDFORD	-	-	-	-
TRAVEL TIME (BOSTON)+	SPRINGFIELD	2:28	1:57	1:47	1:37
TRAVEL TIME (BOSTON)+	PALMER	-	1:40	1:31	1:23
TRAVEL TIME (BOSTON)+	WORCESTER	1:15	0:53	0:53	0:53
TRANSFERS	PITTSFIELD	Direct Rail	Direct Rail	Direct Rail	Direct Rail
TRANSFERS	SPRINGFIELD	Direct Rail	Direct Rail	Direct Rail	Direct Rail
TRANSFERS	CTrail HARTFORD LINE / AMTRAK VERMONT	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG	Rail Transfer at SPG

+ AVERAGE TRAVEL TIME TO/FROM BOSTON (Hours: Minutes)

Table 4-12 – Operations, Segment-Level Metrics, Equipment, Fleet & Maintenance Characteristics (Final Alternatives)

METRIC /	ALTERNATIVE	EXISTING	3	4	4/5 HYBRID
CORRIDOR TYPE	ALIGNMENT	SHARED + EXISTING	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
FREQUENCY	TRAIN ROUND TRIPS	1	8	10	10
FREQUENCY	BUS ROUND TRIPS	0	0	0	0
PITTSFIELD – SPRINGFIELD	MAX. SCHEDULED SPEED (MPH)	50	65	65	65
PITTSFIELD – SPRINGFIELD	AVERAGE SEGMENT SPEED	38.3	43.7	43.7	43.7
PITTSFIELD – SPRINGFIELD	AVERAGE SEGMENT TRAVEL TIME	1:22	1:12	1:12	1:12
SPRINGFIELD – WORCESTER	MAX. SCHEDULED SPEED (MPH)	60	85	100	105
SPRINGFIELD – WORCESTER	AVERAGE SEGMENT SPEED	44.4	50.6	60.0	73.6
SPRINGFIELD – WORCESTER	AVERAGE SEGMENT TRAVEL TIME	1:13	1:04	0:54	0:44
WORCESTER – BOSTON	MAX. SCHEDULED SPEED (MPH)	75	85	85	85
WORCESTER – BOSTON	AVERAGE SEGMENT SPEED	35.4	50.2	50.2	50.2
WORCESTER – BOSTON	AVERAGE SEGMENT TRAVEL TIME	1:15	0:53	0:53	0:53
EQUIPMENT ASSUMPTIONS	TRAINSETS	2	7	8	8
EQUIPMENT ASSUMPTIONS	TRAINSET TYPE	Diesel	Diesel	Diesel	Diesel
EQUIPMENT ASSUMPTIONS	BUSES	0	0	0	0
FLEET REQUIREMENTS	TOTAL RAIL CARS	8	31	35	35
FLEET REQUIREMENTS	TOTAL BUSES	0	0	0	0
DAILY REVENUE MILES	TRAIN MILES	400	2,196	2,588	2,553
DAILY REVENUE MILES	RAIL CAR MILES	3,600	12,278	14,540	14,365
DAILY REVENUE MILES	BUS MILES	0	0	0	0
LAYOVER+	PITTSFIELD (TRACKS)	0	3	3	3
LAYOVER+	SPRINGFIELD (TRACKS)	0	1	1	1
LAYOVER+	BOSTON (TRACKS)	1	3	3	3

+ OVERNIGHT LAYOVER LOCATIONS (TRACKS)

Figure 4-11 – Final Alternative 3 – Passenger Rail, Pittsfield – Boston, on Upgraded Existing Railroad Tracks

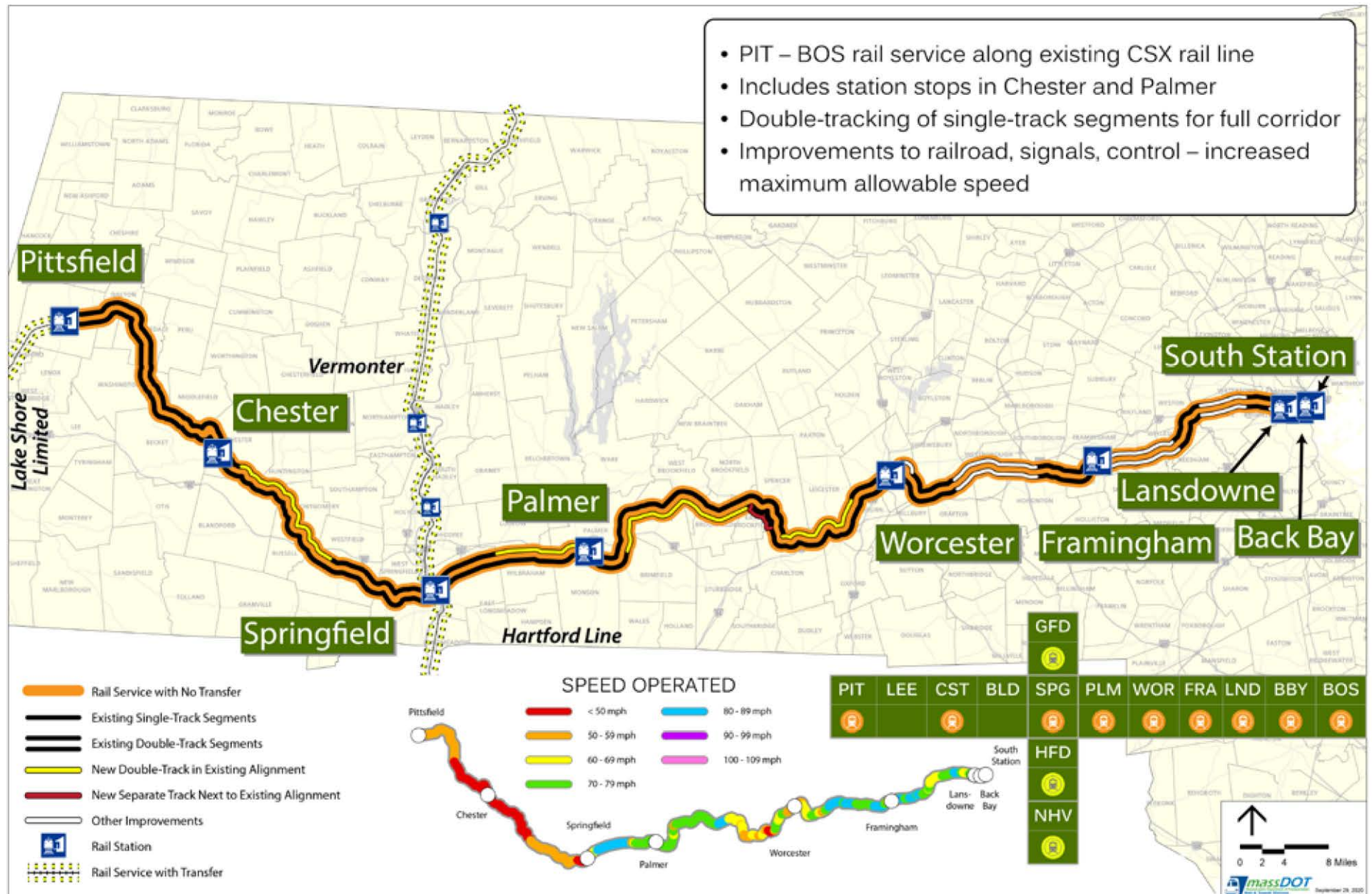
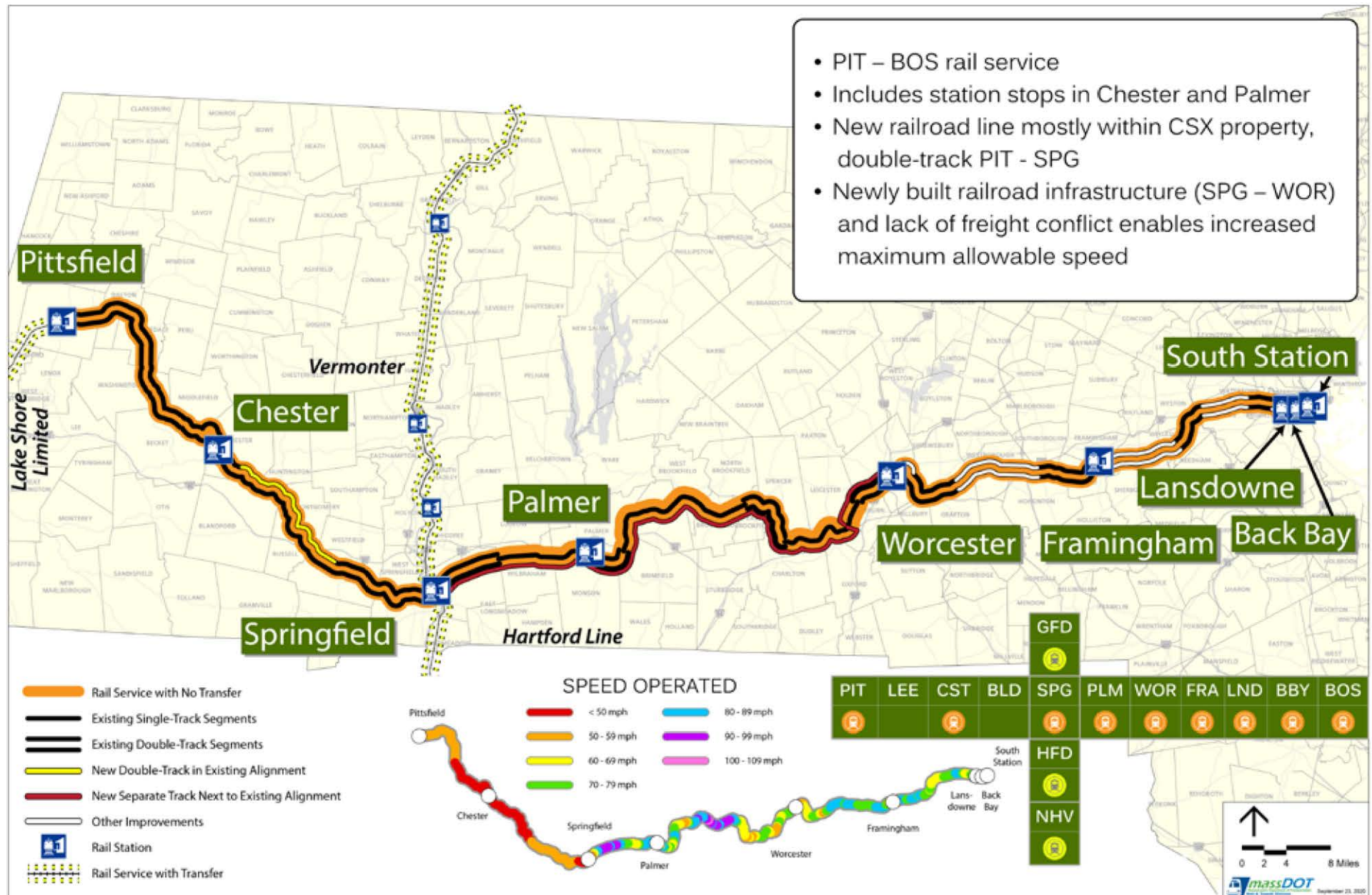


Figure 4-12 – Final Alternative 4 – Passenger Rail, Pittsfield – Boston: Upgraded Existing Rail (PIT – SPG), New Rail in CSX Corridor (SPG – WOR)



- PIT – BOS rail service
- Includes station stops in Chester and Palmer
- New railroad line mostly within CSX property, double-track PIT - SPG
- Newly built railroad infrastructure (SPG – WOR) and lack of freight conflict enables increased maximum allowable speed

Alternative 4/5 Hybrid: Passenger Rail between Pittsfield and Boston with New Track and Priority High-Speed Realignments

The hybrid alternative combines advantages of Preliminary Alternative 4 and Preliminary Alternative 5, while addressing concerns expressed by the Advisory Committee, residents, and other stakeholders. Final Alternative 4/5 provides the same direct rail connections west of Springfield, as well as at Palmer, as in Alternative 4. Final Alternative 4/5 would realize an additional 10-minute travel time savings between Springfield and Worcester by including the seven high-speed curve realignments (shortcuts) and grade crossing consolidations identified within Preliminary Alternative 5, offering Springfield – Boston travel times that approach 1:30 and Pittsfield – Boston journeys typically completed in 3:00 hours.

Figure 4-13 on page 78 shows the proposed infrastructure improvements and key characteristics of Final Alternative 4/5. These improvements would decrease travel times by straightening the slowest, most problematic curves in the central segment of the railroad, enabling sustained high-speed operations over long stretches of the rail line as opposed to frequently decelerating and accelerating through the slow speed curves that greatly reduce the total capability to travel quickly. The hybrid alternative also improves multimodal safety by converting three at-grade crossings into two overhead bridges (i.e., road runs above railroad).

Table 4-13 (page 79) presents a summary of key metrics for each proposed shortcut or improvement while Figure 4-14 shows a map of the approximate locations for these segments.

Aside from the changes between Springfield and Worcester, all key infrastructure and service characteristics, including the provision of up to nine new weekday rail round trips, would be identical under both Alternative 4/5 Hybrid and Alternative 4 to facilitate reasonable comparisons among alternatives with similar levels of infrastructure investment.

Figure 4-13 – Final Alternative 4/5 Hybrid – Passenger Rail, Pittsfield – Boston: Upgraded Existing Rail (PIT – SPG), New Rail with Priority Realignments (SPG – WOR)

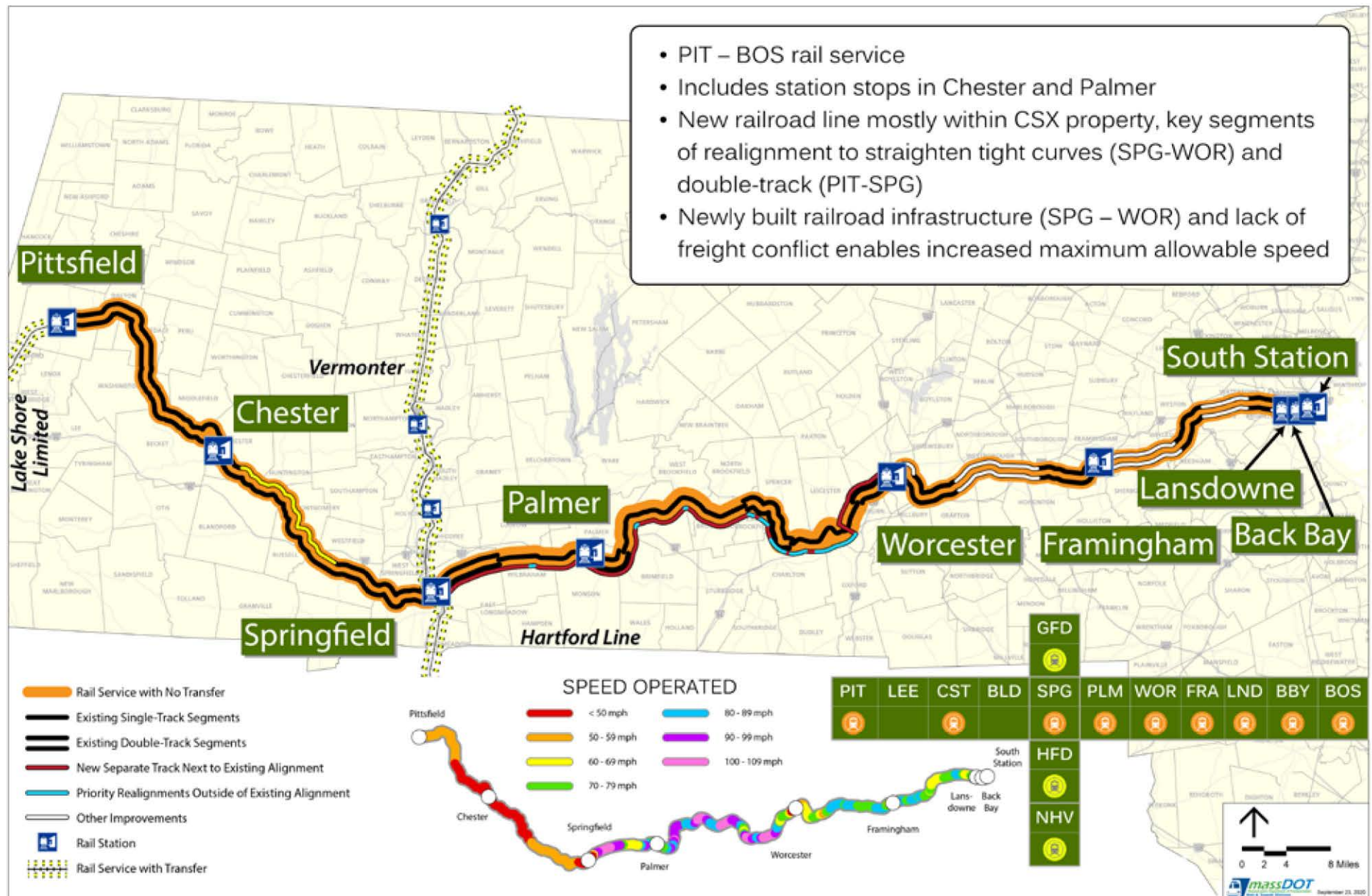
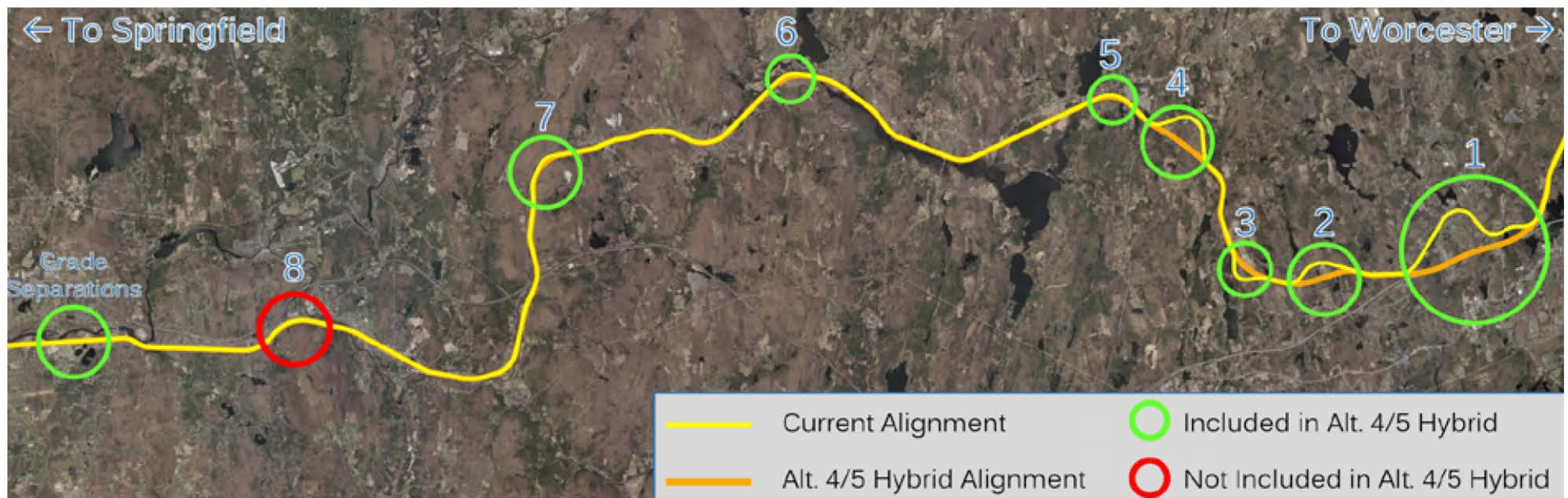


Table 4-13 – Key Metrics for Shortcuts Considered in Final Alternative 4/5 Hybrid

SHORTCUT	LOCATION	LENGTH DECREASE (MI)	TRAVEL TIME SAVINGS	NET COST (\$2020 M)	RATE (\$M/min)
1	Auburn, Oxford, Charlton	0.64	03:58	\$199	\$50
2	Charlton	0.14	00:13	\$61	\$269
3	Charlton	0.24	01:32	\$86	\$56
4	Spencer	0.47	01:35	\$330	\$209
5	East Brookfield	0.04	00:28	\$52	\$110
6	West Brookfield	0.04	00:28	\$6	\$12
7	Warren	0.05	01:14	\$5	\$4
8	Monson (*Not Feasible)	NA	NA	NA	NA
GRADE SEPARATE CROSSINGS	Wilbraham (Consolidate 3 Crossings into 2 Overhead Bridges)	0.00	00:52	\$27	\$30

* - Note: The realignment in Monson is classified as “not feasible” because while the track could be realigned, doing so would not offer benefit because an adjacent curve (that cannot be straightened) prevents the trains from going any faster through that segment.

Figure 4-14 – Map of Shortcuts Considered for Final Alternative 4/5 Hybrid



4.7. Evaluation of Final Alternatives

During the evaluation of the Preliminary Alternatives, members of the Advisory Committee, residents, and stakeholders inquired about differences between the ridership and capital costs developed for the East – West study Preliminary Alternatives and the ridership and capital cost estimates developed for the previous NNEIRI study. Study participants noted the NNEIRI analysis had indicated higher total ridership at a lower capital cost for the section of the East – West Corridor common to both studies (i.e., Springfield – Boston). The NNEIRI process was discussed in Section 2.3; these differences in ridership and cost resulted from the following differences in the study analysis:

- Geographic Coverage
 - NNEIRI had a much larger geographic extent and focused on longer distance high-speed rail trips between Boston and Montreal, Boston and New York, and Montreal and New York. The higher NNEIRI ridership forecasts were mostly due to these longer trips, especially from those made along the New York City/ Hartford Line segment. When comparing only the same geographic connections, the ridership estimates for NNEIRI and the initial ridership estimates for the East – West Preliminary Alternatives are nearly identical.
 - NNEIRI did not consider an alternative that extended west of Springfield. This segment, where the corridor winds through mountainous terrain and crosses the Westfield River 22 times, adds significant costs.
- Bridge Reconstruction Costs – NNEIRI's alignments and cost estimates did not reflect CSX's guidelines for physical separation of restored double-track segments. These standards necessitate reconstruction rather than rehabilitation of many bridges, at a much higher cost. In addition, NNEIRI did not reflect utility relocation costs, which are another major expense.

In evaluating the Final Alternatives, elements of the East – West study's technical approach to estimating ridership and capital costs were reviewed and refined.

Ridership Forecasts. Members of the Advisory Committee, residents, and stakeholders expressed concerns that the ridership forecasts for the Preliminary Alternatives were low relative to other rail lines in the region, such as the Downeaster Line from Brunswick, Maine to Boston and the newly launched CTail Hartford Line between New Haven, Connecticut and Springfield. The feedback included questions about specific modeling assumptions, such as the distance from which each station can draw potential riders, and whether the ridership forecasts include “induced demand,” which is an increase in total travel demand that results from improved access or convenience acting as a catalyst to further economic activity.

As discussed in Section 4.4, Evaluation Criteria, coefficients in the travel forecasting model were adjusted to better reflect the downtown Boston market's demand and a second proxy service was added to provide a range of potential forecasts. The ridership forecasting for the Final Alternatives evaluation was re-run, with the following adjustments:

- Two ridership forecasts were conducted for each Final Alternative, yielding a lower-end and a higher-end forecast range
- The ridership forecasts used two different base proxy railroad services: an enhanced Hartford Line (same route but with refined attributes as the Preliminary Alternatives) and a Downeaster Line proxy.
- Both of the ridership models were carefully calibrated with specific adjustments to enhance the validity of the assumptions

Table 4-14 on the next page provides a summary of the review and the updates made in the ridership forecasting model for the evaluation

of Final Alternatives. Under the “Enhanced” Hartford Line scenario, the initial proxy station pairs used to forecast ridership for Preliminary Alternatives were adjusted to better reflect the large pull of the Boston market and to factor in a level of induced demand into the estimates. For the Downeaster proxy, the existing service to North Station already captured the attractiveness of the Boston central business district with respect to travel demand. Since Downeaster Service has been operating for a decade, it was considered matured with any induced demand effects already present in the level of travel. Therefore, no additional induced demand was applied to the proxy forecasts.

The 2040 annual ridership forecasts for each Final Alternative, with “Enhanced” Hartford Line and Downeaster Line modeling assumptions, are shown in Table 4-15 on the following page, along with the change in annual auto and rail trips and vehicle miles traveled (VMT) in 2040.

- As with the Preliminary Alternatives, ridership increases in concert with level of infrastructure investment, travel speed, and service frequency. Final Alternative 4/5 has higher forecast ridership compared to Alternative 4, which in turn has more boardings than Alternative 3.
- For each alternative, the Downeaster scenario has higher forecast ridership compared to the “Enhanced” Hartford Line, with increases ranging between 19 to 29 percent and gains at all stations except Framingham. The strongest relative gains occur in Chester, Pittsfield, Springfield (Hartford Line Transfers), and Worcester (Direct Access).
- For the “Enhanced” Hartford Line, approximately 85 percent of ridership is forecasted to occur within the Springfield-Boston market, followed by approximately seven percent of ridership between the Palmer-Boston and Pittsfield-Chester markets and six percent between Palmer-Boston and the Hartford Line.

Table 4-14 – Summary of Refinements to Ridership Modeling (Final Alternatives)

MARKET / MODEL FACTOR	“ENHANCED” HARTFORD LINE	DOWNEASTER
BOSTON REPRESENTATION	Adjusted to better reflect the large pull of Boston employment	Included directly in Downeaster baseline
MARKET COMPETITION	Adjusted for Hartford Line having more medium or large competitive markets (i.e., New York, Hartford, New Haven)	Adjusted for Downeaster not having any other medium or large competitive markets (only Boston)
TRIP DISTANCE	Switched to longer-distance station pairs to reflect a better mix of intercity and commuter travel	Long trip distances match well with Downeaster station pairs
MARKET TYPES / PROXY PAIRS	Refined station pairs to better match on market types (rural, urban, demographics, etc.)	Refined station pairs to better match on market types (rural, urban, demographics, etc.)
DEMOGRAPHIC BUFFERS	Released constraint on Springfield buffer to reduce required rail transfers and incorporate additional communities, like the 5 Colleges Area.	Released constraint on Springfield buffer to reduce required rail transfers and incorporate additional communities, like the 5 Colleges Area.
INDUCED DEMAND	Added into final forecast	Assumed included in Downeaster baseline proxy ridership

Table 4-15 – Ridership Results (Final Alternatives) – 2040 Annual One-Way Boardings and Change in Vehicle Miles Traveled

METRIC /	ALTERNATIVE	3	3	4	4	4/5 HYBRID	4/5 HYBRID
STATION	BOARDING TYPE	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER
PITTSFIELD	DIRECT ACCESS	11,400	27,650	13,650	31,500	14,650	33,400
LEE	DIRECT ACCESS	--	--	--	--	--	--
CHESTER	DIRECT ACCESS	1,400	4,200	1,700	4,700	1,850	5,000
BLANDFORD	DIRECT ACCESS	--	--	--	--	--	--
SPRINGFIELD	TRANSFERS (HARTFORD LINE)	10,250	22,200	10,500	21,150	11,250	23,600
SPRINGFIELD	DIRECT ACCESS	105,700	116,750	135,700	140,600	152,400	159,500
PALMER	DIRECT ACCESS	4,950	6,550	6,050	7,100	6,500	8,000
WORCESTER	TRANSFERS (MBTA)	6,400	9,450	7,250	9,550	8,100	11,350
WORCESTER	DIRECT ACCESS	19,300	35,250	23,250	39,500	25,500	43,250
FRAMINGHAM	LAKE SHORE LIMITED	1,550	650	1,550	450	1,750	800
BOSTON, BACK BAY & LANSLOWNE	DIRECT ACCESS	117,350	135,550	149,700	161,500	169,200	184,100
ALL STATIONS	TOTAL ONE-WAY BOARDINGS	278,300	358,250	349,350	416,050	391,200	469,000
ALL STATIONS	ANNUAL VMT CHANGE – AUTO	(23,371,876)	(31,234,674)	(29,497,986)	(36,318,653)	(33,042,389)	(40,831,308)
ALL STATIONS	ANNUAL VMT CHANGE – RAIL	509,540	509,540	798,620	798,620	785,845	785,845

Note: Negative values reflect a decrease in VMT for a given mode/alternative.

- For the Downeaster modeling assumptions, between 70 and 74 percent of ridership occurs in the Springfield-Boston market, followed by 15 percent between the Palmer-Boston and Pittsfield-Chester markets and about 10 percent between Palmer-Boston and the Hartford Line.
- Within each alternative, the two modeling scenarios generally estimate a similar number of trips for the Springfield-Boston market. However, the relative proportions differ because the Downeaster scenario's total ridership is substantially higher and, more importantly, much of its forecasted ridership occurs along longer segments (i.e., Pittsfield-Chester to Palmer-Boston or Palmer-Boston transfers to the Hartford Line) relative to the results for the "Enhanced" Hartford Line scenario.
- The number of transfers between the Hartford Line and East-West service in Springfield stays approximately the same across alternatives for a given modeling scenario, as do the MBTA

- Commuter Rail transfers in Worcester.
- For each Final Alternative, direct access trips at Springfield (90 percent) and Worcester (80 percent) accounted for most of the boardings, not transfers to/from the Hartford Line (10 percent) or MBTA Commuter Rail (20 percent). The strong proportion of direct access trips to these stations reflects the model's built-in assumption of a transfer penalty. Since passengers must spend additional time switching between East-West trains and MBTA or Hartford Line services, there is a relatively lower demand for connections between these services than if they were modeled as thru-running trains (e.g., if a one-seat rail journey was offered between Hartford and Worcester).
- Comparing the scenarios, the Downeaster Line is approximately twice as long as the Hartford Line and its longer segments tend to align better with the spacing between the markets considered along the East-West Corridor. In terms of market size, the Downeaster includes many small communities connecting to a major market (Boston) while the Hartford Line consists primarily of medium-sized markets connecting either with each other or gravitating towards the nation's largest market (New York City).

Project Costs

The Final Alternatives analysis entailed a review and refinement of the cost estimates. In response to the comments from study participants, capital costs for the Preliminary Alternatives – including quantities of infrastructure investment, costs assumptions for each unit of those investments, and contingency assumptions – were all thoroughly reviewed and clarified as appropriate. The revised capital cost estimate for each Final Alternative is presented in Table 4-16 on the next page, including the cost for each major cost component (SCC) and geographic segment, along with annual O&M costs.

- **Capital Cost Estimates.** The review and refinement of capital costs resulted in the following revisions to the capital costs:
 - The unit cost for track realignment in the Worcester to Boston segment was refined based on a reevaluation of the degree of improvement required. The cost estimates for the Preliminary Alternatives priced the proposed upgrades to existing track like new track. In the revised costs, a new, lower cost assumption was introduced to more appropriately account for the upgrades.
 - Utility relocation unit costs were broken out into urban and rural utility upgrades. The cost estimates for the Preliminary Alternatives treated all utility relocation costs the same and used a higher “urban” utility relocation costs. However, considering the reduced density and complexity of utilities in more rural areas, the utility relocation cost was broken down to include a lower “rural” utility relocation cost.
 - Retaining wall costs were refined to reflect the difference in complexity of construction for retaining walls built adjacent to existing shared passenger/freight tracks vs. retaining walls built for new passenger-only track.

The Unallocated Contingency, which is a cost increment to reflect general uncertainty and unknown factors in project development, was reduced from 10 percent to 5 percent. Both are generally consistent with FRA guidance, which calls for 5 to 8 percent Unallocated Contingency, but the new assumption results in a capital cost that is relatively lower than that presented previously for the same suite of improvements.

Table 4-16 – Summary Capital Costs by Standard Cost Category (SCC) and Segment, and Annual Operations & Maintenance Costs (2020 Million Dollars)

METRIC /	ALTERNATIVE	3	4	4/5 HYBRID
COST BASIS	TYPE	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
CAPITAL BY CATEGORY	10 GUIDEWAY & TRACK ELEMENTS	\$643.059	\$972.301	\$1,358.746
CAPITAL BY CATEGORY	20 STATIONS, STOPS, TERMINALS	\$24.720	\$28.325	\$28.325
CAPITAL BY CATEGORY	30 SUPPORT FACILITIES	\$31.930	\$31.930	\$31.930
CAPITAL BY CATEGORY	40 SITEWORK & SPECIAL CONDITIONS	\$449.700	\$857.987	\$889.435
CAPITAL BY CATEGORY	50 SYSTEMS	\$75.974	\$91.628	\$88.973
CAPITAL BY CATEGORY	CONSTRUCTION SUBTOTAL (10-50)	\$1,225.383	\$1,982.171	\$2,397.409
CAPITAL BY CATEGORY	CONSTRUCTION CONTINGENCY (35%)	\$428.884	\$693.760	\$839.093
CAPITAL BY CATEGORY	CONSTRUCTION TOTAL	\$1,654.266	\$2,675.931	\$3,236.503
CAPITAL BY CATEGORY	60 ROW, LAND, EXISTING IMPROVEMENTS	\$16.605	\$41.644	\$41.867
CAPITAL BY CATEGORY	70 VEHICLES	\$131.840	\$155.736	\$155.736
CAPITAL BY CATEGORY	80 PROFESSIONAL SERVICES (30%)	\$496.280	\$802.779	\$970.951
CAPITAL BY CATEGORY	SUBTOTAL (10-80)	\$2,298.991	\$3,676.091	\$4,405.056
CAPITAL BY CATEGORY	90 UNALLOCATED CONTINGENCY (5%)	\$114.950	\$183.805	\$220.253
CAPITAL BY CATEGORY	100 FINANCE CHARGES	\$0.000	\$0.000	\$0.000
CAPITAL BY CATEGORY	TOTAL PROJECT COST (10-100)	\$2,413.940	\$3,859.895	\$4,625.309
CAPITAL BY SEGMENT	PIT-SPG	\$527.409	\$527.409	\$527.409
CAPITAL BY SEGMENT	SPG-WOR	\$1,825.234	\$3,271.189	\$4,036.603
CAPITAL BY SEGMENT	WOR-BOS	\$61.297	\$61.297	\$61.297
ANNUAL O&M	RAIL	\$27.900	\$34.094	\$33.895

These were the only significant changes to the unit costs, but each of these refinements resulted in a modest reduction in capital costs. As a result of these revisions, the capital cost of Final Alternative 3 is approximately 15 percent lower than that of Preliminary Alternative 3, while the capital cost of Final Alternative 4 is about 13 percent lower than Preliminary Alternative 4.

Since Preliminary Alternative 5 did not include passenger rail service west of Springfield, the overall capital cost for Final Alternative 4/5 is not directly comparable to any of the Preliminary Alternatives. However, along the Springfield to Worcester segment, the revised capital costs for Final Alternative 4/5 are nearly 19 percent less than Preliminary Alternative 5.

As noted above, in comparing the Final Alternatives, all differences in capital costs are due to variations in infrastructure in the Springfield – Worcester segment of the Corridor. The following are key takeaways related to incremental differences in capital costs among the Final Alternatives.

- Exchanging the restoration of double-track along a shared freight-passenger corridor (Alternative 3) in favor of developing a separate passenger-only track between Springfield and Worcester parallel to the existing alignment (Alternative 4) is estimated to increase construction costs by \$1,022 M when the 35% contingency is included.
- Introducing seven curve realignments and consolidating three at-grade crossings in Wilbraham into two overhead bridges (Alternative 4/5 Hybrid) would require an additional \$561 M in construction costs, inclusive of the 35% contingency, beyond simply developing a parallel passenger-only track (Alternative 4).
- The “fully-loaded” costs associated with each individual shortcut, as well as the estimated travel time savings, length, and cost-efficiency were provided in Table 4-13 on page 79. It should be noted that the construction-based costs cited above were used to allow for comparisons between Final Alternatives with different service levels (and therefore vehicle requirements).
- As a means of benchmarking the East – West capital cost estimates, they were compared to capital costs for the South Coast Rail project, for which MassDOT recently awarded a construction contract. Both the East – West Passenger Rail Study and the ongoing South Coast Rail project use a common set of Massachusetts-specific source projects for establishing the unit costs. The South Coast Rail designer’s estimate for construction costs came within 1.3 percent of

the awarded construction bid, suggesting a high degree of accuracy in these cost estimates.

- The resulting per-mile capital cost for the East – West Final Alternatives is also in a comparable range to the per-mile capital cost for South Coast Rail. The South Coast Rail project entails \$1.14 billion in capital costs to upgrade 36 miles of track, a rate of \$31.7 million per mile. For the 151-mile length of the East – West project, the following are the capital costs and per-mile cost for the East – West Final Alternatives.
 - Alternative 3 \$2.41 billion, \$16.0 million per mile
 - Alternative 4 \$3.86 billion, \$25.6 million per mile
 - Alternative 4/5 \$4.63 billion, \$30.6 million per mile
- **Operating Cost Estimates.** The additional train trips proposed within Alternatives 4 and 4/5 Hybrid result in more mileage and higher annual O&M expenses relative to Alternative 3. The realignments proposed for Final Alternative 4/5 Hybrid produce a slightly shorter route between Springfield and Worcester, which results in a minor decrease in annual O&M spending compared to Alternative 4.

Environmental and Community Impacts

Since the shortcuts included within Alternative 4/5 establish new transportation corridors within the central segment, it would present a comparatively greater level of impact relative to Alternative 4, particularly within Auburn, Oxford, Spencer, East Brookfield, West Brookfield, Warren, and Charlton, which is home to three of the seven proposed shortcuts. The initial 0.64-mile shortcut spans segments of Auburn, Oxford, and Charlton.

- **Environmental Impacts.** Table 4-17 on the following page summarizes potential impacts to environmental resources, including waterways and waterbodies, flood-prone areas, and sensitive areas like wetlands, ACECs, and priority habitat.

Table 4-17 – Environmental Impacts (Final Alternatives)

	ALTERNATIVE	3	4	4/5 HYBRID
IMPACT TYPE	METRIC	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
WATER CROSSINGS	COUNT	43	48	48
WETLANDS	COUNT	12	60	61
WETLANDS	TOTAL AREA (ACRES)	0.45	7.73	8.87
OPEN WATER	COUNT	5	15	32
OPEN WATER	TOTAL AREA (ACRES)	0.93	4.02	4.91
FLOODPLAINS+	COUNT	43	77	84
FLOODPLAINS+	TOTAL AREA (ACRES)	19.32	35.63	37.74
ACEC	COUNT	0	0	0
ACEC	TOTAL AREA (ACRES)	0	0	0
HABITAT++	COUNT	8	13	23
HABITAT++	TOTAL AREA (ACRES)	35.79	58.57	59.01

+ 100-YEAR FLOODPLAINS

++ PRIORITY HABITAT

- **Water Resources (Waterways, Wetlands, and Open Water Features)**
 - For each Final Alternative, the restoration of double-track between Pittsfield and Springfield would impact seven rivers or streams, two wetland resources, and one open water feature.
 - On the west side of Worcester, the Quaboag River

would be affected under each Final Alternative; however, each alternative would impact the resource in different locations. Alternative 4/5 would present the highest impacts to this resource among the Final Alternatives.

- Along the Springfield – Worcester segment, the comparatively limited profile of improvements for Alternative 3 would result in the lowest impacts, affecting a total of 36 rivers or streams, 10 wetland resources and four open water bodies.
- Relative to Alternative 3, Alternative 4's development of a parallel passenger-only track along the central segment would result in increased impacts to water resources, including a total of 41 rivers or streams (five more), 58 wetland resources (48 more), and 14 open water features (10 more).
- Compared to Alternative 4, the shortcut realignments included in Alternative 4/5 would produce increases in both the area of impacted wetlands resources (1.14 acres of additional impact to one additional resource relative to Alternative 4) and the number of impacted open water features (more than doubles to a total of 32 open water bodies).
- The seven shortcuts in Alternative 4/5 affect 10 additional wetlands that are not affected by Alternative 3 or Alternative 4. These resources are located in Spencer, West Brookfield, Warren, East Brookfield, Auburn, Oxford and Charlton.

- **Floodplains**
 - In each Final Alternative, the implementation of double-track between Pittsfield and Springfield would result in 19 encroachments into the 100-year floodplain, covering nearly seven acres.

- Impacts to floodplains would be most prominent along the central segment where Alternative 3 would affect a total of 24 floodplain zones covering over 12 acres.
- Between Springfield and Worcester, the development of a passenger-only track would increase impacts, with the count of floodplains impacted rising to a total of 58 areas (34 more than Alternative 3) and the total area affected more than doubling (29 additional acres compared to Alternative 3).
- Alternative 4/5 carries another seven encroachments totaling 2.12 acres beyond Alternative 4.
- **Areas of Critical Environmental Concern**
 - None of the Final Alternatives anticipate impacts to any properties currently listed as an Area of Critical Environmental Concern.
- **Protected Species Habitats**
 - Alternative 3 would present the lowest impacts to priority habitats (eight habitats affected totaling over 35 acres) while Alternative 4/5 would exert the highest (23 habitats affected totaling 59 acres).
 - Each Final Alternative would affect two primary habitat resources that located along the western segment for a total of nearly 16 acres of impacts. These facilities span portions of Montgomery, Huntington, Chester (PH 1375) and Westfield, Montgomery, and Russell (PH 1107). None of the Final Alternatives would result in impacts to priority habitats located along the eastern segment.
 - Between Springfield and Worcester, impacts to priority habitats range from a low of eight habitats totaling 20 acres under Alternative 3 to a high of 21 habitats totaling over 43 acres in Alternative 4/5.
 - Although the incremental impact associated with the hybrid's shortcuts only amounts to 0.14 acres of land, Alternative 4/5 has a higher level of encroachment, generating impacts to 10 more habitats between Springfield and Worcester than Alternative 4.
- **Air Quality**
 - Each of the Final Alternatives would generate a net increase in emissions despite a substantial decrease in 2040 annual auto-based VMT, as shown in Table 4 18 on the next page.
 - The decrease in emissions from automobiles would not be sufficient to offset the additional emissions stemming from running diesel locomotives at the frequencies proposed.
- **Noise & Vibration**
 - Overall exposure to noise increases with both speed and frequency of service. Since Alternatives 4 and 4/5 proposed higher scheduled speeds and two new weekday rail round trips beyond Alternative 3, noise impacts would be relatively higher.
 - Since they would introduce additional noise outside of an established transportation corridor, the shortcuts included within Alternative 4/5 would present relatively higher noise impacts than Alternative 4 despite operating the same service frequencies and similar scheduled speeds.

Table 4-18 – 2040 Annual Change in VMT and Associated Emissions Impacts (Final Alternatives)

METRIC /	ALTERNATIVE	3	3	4	4	4/5 HYBRID	4/5 HYBRID
2040 ANNUAL NET CHANGE	TYPE / SCENARIO	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER
VMT	AUTO	(23,371,876)	(31,234,674)	(29,497,986)	(36,318,653)	(33,042,389)	(40,831,308)
VMT	RAIL	509,540	509,540	798,620	798,620	785,845	785,845
EMISSIONS (METRIC TONS)	CO2	8,433.21	7,023.03	14,497.05	13,273.78	13,544.84	12,147.92
EMISSIONS (METRIC TONS)	NOX	154.24	154.11	241.87	241.76	237.93	237.80
EMISSIONS (METRIC TONS)	PM	4.80	4.77	7.54	7.52	7.41	7.38
EMISSIONS (METRIC TONS)	SOX	0.08	0.07	0.14	0.13	0.13	0.12
EMISSIONS (METRIC TONS)	VOC	7.39	7.37	11.60	11.58	11.41	11.38

Note: Negative values reflect decreases in associated emissions (benefit) while positive values represent resulting increases in emissions (disbenefit).

- **Community Impacts.** Table 4-19 on the following page summarizes impacts to historic sites and districts, recreational and open space resources protected under Article 97, and existing at-grade crossings and bridges for the Final Alternatives.
 - **Cultural Resources & Historic Properties.** Historic properties and historic districts are subject to historic protections by virtue of being listed on the federal National Register of Historic Places.
 - Alternative 3 would generate the lowest impacts to historic sites (two) and districts (two) while Alternatives 4 and 4/5 would each entail impacts to a total of three sites and five districts.
 - Each Final Alternative would impact a historic Boston and Albany (B&A) Main Line bridge in West Brookfield (Long Hill Road) and at least one additional feature. Alternatives 3 and 4 would also impact another B&A Railroad bridge, this time along the western segment in Huntington (Basket St).
 - Alternatives 4 and 4/5 would both impact Palmer's historic Union Station. The hybrid alternative would also entail impacts to another historic site along the central segment – Cutler Company Grain Warehouse (West Brookfield).
 - For historic areas, each Final Alternative would impact one district between Pittsfield and Springfield (Huntington Village) and another along the central segment (West Brookfield Center). The separate track alternatives would also affect the Downtown Springfield Railroad District and two resources in Worcester (Holy Name of Jesus Complex and Blackstone Canal Historic District).
- **Protected Lands**
 - **Article 97.** The number of Article 97 protected recreational and open space properties impacted would range from five resources spread over eight parcels at just over three acres (Alternative 3) to a maximum of 11 resources over 30 parcels at over 14 acres (Alternative 4/5).

Table 4-19 – Community Impacts (Final Alternatives)

METRIC /	ALTERNATIVE	3	4	4/5 HYBRID
IMPACT TYPE	METRIC	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
HISTORIC SITES	COUNT	2	3	3
HISTORIC PROPERTIES	COUNT	2	5	5
HISTORIC PROPERTIES	TOTAL AREA (ACRES)	4.01	6.77	6.62
ARTICLE 97 LANDS	COUNT (RESOURCES)	5	9	11
ARTICLE 97 LANDS	TOTAL AREA (ACRES)	3.03	9.87	14.57
TRANSPORTATION	IMPROVED AT-GRADE CROSSING	30	30	27
TRANSPORTATION	UNDERGRADE BRIDGES (FT)	6,800	10,670	16,100
TRANSPORTATION	OVERHEAD BRIDGES	25	42	42

- Along the western segment, each Final Alternative would impact two Article 97-listed resources along the western segment spread across four parcels with just under three acres of impact, mainly the Tekoa Mountain WMA in Russell (2.96 acres) but also an area of the Chester-Blandford State Forest in Chester.
- Between Springfield and Worcester, Alternative 3 would have very limited impacts, touching three resources spread over four parcels covering just 0.06 acres. Each of the Final Alternatives would affect these resources, which include the Quaboag WMA (East Brookfield), Spencer State Forest (Spencer) and Bloomberg Patrick APR (Charlton).
- The development of a passenger-only track along the central segment increases impacts to Article 97 properties, with the impacted area under Alternative 4 increasing by a factor of over 100 (0.06 to 6.90 acres) and the number of affected resources rising from three to seven (four more) relative to Alternative 3.
- Alternative 4 would introduce impacts to Spectacle Pond Park (Wilbraham), Conservation Area (owned and managed by Town of Auburn), Fountain Enterprises Inc APR (West Brookfield), Railroad Park (Spencer), and additional portions of the Quaboag WMA (Brookfield) that would not be affected under Alternative 3.
- Although Alternative 4/5 would only touch two additional resources between Springfield and Worcester beyond Alternative 4, the realignments cause the total area impacted to grow by 68 percent (4.71 acres).
- Compared to Alternative 4, the hybrid would affect additional resources, including the Stafford Street Conservation Area (Charlton) and an unnamed area owned and managed by the Town of Auburn, and also affect new parcels that are portions of the Bloomberg Patrick APR (Charlton), Conservation Area (Auburn),

and a publicly-held portion of the Spencer State Forest owned by the Department of Conservation and Recreation (DCR).

- **Section 4(f).** Most of the open space and recreational resources protected by Article 97 would also be subject to federal Section 4(f) protection.
 - Alternative 3 would have minimal impacts to Section 4(f) protected recreational and open space properties.
 - The use of a passenger-only track in Alternatives 4 and 4/5 would entail an order of magnitude increase in impacts between Springfield and Worcester, which would make these options more difficult to advance compared to Alternative 3.
- **Section 6(f).** None of the open space resources that would be impacted were funded through the federal Land and Water Conservation Fund. Therefore, recreational and open space lands impacted would not be subject to protections under Section 6(f).
- **At-Grade Crossing Warning/Safety Systems**
 - Of the 38 at-grade crossings along the existing rail corridor, Alternatives 3 and 4 would implement improvements at 30 crossings, including 18 locations along the western segment, four between Springfield and Worcester, and eight from Worcester to Boston.
 - In addition to the shortcuts, Alternative 4/5 also includes the consolidation of three closely spaced at-grade crossings in Wilbraham into two overhead bridges.
 - While full grade separation comes at significant additional cost compared to installing or upgrading existing crossing protection infrastructure, this approach would reduce potential conflicts due to a proximate residential subdivision and two industrial properties that routinely rely on heavy vehicles with lower acceleration rates.
- **Bridges**
 - Each of the Final Alternatives includes the restoration of double-track between Pittsfield and Springfield, which would entail impacts to 0.22 miles of undergrade bridges and five overhead bridges along the western segment.
 - Between Springfield and Worcester, each of the Final Alternatives would generate undergrade bridge impacts that are higher than the previous alternative, with impacts ranging from 1.00 mile (Alternative 3) to 2.76 miles (Alternative 4/5).
 - Along the central segment, the hybrid's shortcuts carry an additional 1.03 miles of incremental impacts to undergrade bridges beyond Alternative 4.
 - With the move to a separate passenger-only track, impacts to overhead bridges located along the central segment increase by 85 percent, moving from 20 structures to 37 for both Alternative 4 and 4/5.
 - Each of the Final Alternatives includes 0.07-miles of adjustments to nine undergrade bridge structures located between Worcester and Boston.
- **Property and Building Impacts.** Table 4-20 on the following page summarizes right-of-way and building impacts under the three Final Alternatives. The improvements proposed for Alternative 3 would primarily fall within the existing railroad ROW, so they would have lower property impacts relative to the other two Final Alternatives which contemplate new separate passenger-only track segments and sidings.
 - Property impacts range from a minimum of 100 parcels across 168 acres under Alternative 3 to a maximum of 559 parcels covering nearly 374 acres in Alternative 4.
 - The Pittsfield-Springfield segment would generate

Table 4-20 – Property & Building Impacts (Final Alternatives)

METRIC /	ALTERNATIVE	3	4	4/5 HYBRID
PARCEL TYPE	METRIC	SHARED + EXISTING	SHARED + SEPARATE	SHARED + SEPARATE
ALL	COUNT	100	559	514
ALL	TOTAL AREA (ACRES)	168.4	373.9	364.6
NON-RAIL/ROAD	COUNT	47	423	400
NON-RAIL/ROAD	TOTAL AREA (ACRES)	16.5	77.3	99.2
BUILDINGS	RESIDENTIAL	0	26	34
BUILDINGS	COMMERCIAL	0	54	52
BUILDINGS	OTHER	0	12	12
BUILDINGS	TOTAL	0	92	98

impacts to 28 properties over nearly 45 acres. No impacts are anticipated along the eastern segment between Worcester and Boston.

- Along the central segment connecting Springfield and Worcester, property impacts range from a low of 72 parcels at nearly 124 acres in Alternative 3 to a maximum of 531 parcels totaling 329 acres for Alternative 4.
- Property impacts for the passenger-only track alternatives are higher than Alternative 3, with the count of parcels impacted increasing by a factor of five and the total area of impact growing by a factor of two.
- The realignments proposed within Alternative 4/5 avoid property impacts to 45 parcels and over nine acres of land between Springfield and Worcester, which would otherwise be impacted under Alternative 4, for a total of 486 parcels across 320 acres along the central segment.
- Each Final Alternative would result in property impacts to parcels under railroad, public, and private ownership.

Although Alternative 4/5 appears to be less impactful than Alternative 4, it more or less transfers a similar area of total impacts to a more controversial form of ownership – privately-held parcels.

- While Alternative 4 only includes an additional nine acres relative to the hybrid, it has nearly 45 acres more land within the railroad-owned category. The use of the shortcuts in Alternative 4/5 effectively diverts impacts from railroad-owned parcels to an additional 22 acres of privately-owned land and 12 acres of public ROW compared to a parallel separate track.

Benefit-Cost Analysis. Based on the refined ridership forecasts and cost estimates, Table 4-21 on the next page shows the cumulative transportation-related benefits and costs anticipated for each Final Alternative after 30 years of operations (at a seven percent discount rate). The table also shows travel time savings, net present value, and benefit-cost ratio. The benefit-cost ratio, shown in the bottom row,

reflects the public sector's return on a given investment, with a value greater than one indicating that the project would generate societal benefits that are higher than the investment cost. The analysis follows current federal guidelines and formula to be compliant with established

funding eligibility criteria. While other non-transportation metrics may be worthy of consideration in their own right, they have not been formally integrated into federal evaluations.

Table 4-21 – Benefit-Cost Summary at 7% Discount Rate (Final Alternatives)

	ALTERNATIVE	3	3	4	4	4/5 HYBRID	4/5 HYBRID
CATEGORY	TYPE / SCENARIO	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER	"ENHANCED" HARTFORD LINE	DOWNEASTER
2040 TRAVEL TIME SAVINGS	PER RIDER (MIN)	27.7	22.6	35.8	30.9	42.8	37.8
2040 TRAVEL TIME SAVINGS	ANNUAL (HRS)	128,178	134,910	208,195	214,542	278,752	295,829
30-YEAR BENEFITS	TRAVEL TIME	\$19	\$20	\$31	\$32	\$41	\$44
30-YEAR BENEFITS	SAFETY	\$64	\$87	\$81	\$100	\$91	\$113
30-YEAR BENEFITS	VEHICLE COSTS	\$62	\$83	\$79	\$97	\$88	\$109
30-YEAR BENEFITS	PAVEMENT DAMAGE	\$0.1	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3
30-YEAR BENEFITS	EMISSIONS	(\$25)	(\$24)	(\$39)	(\$39)	(\$38)	(\$38)
30-YEAR BENEFITS	RESIDUAL VALUE	\$40	\$40	\$64	\$64	\$77	\$77
30-YEAR BENEFITS	TOTAL BENEFITS	\$162	\$207	\$215	\$255	\$259	\$306
CUMULATIVE COSTS	CAPITAL	(\$1,669)	(\$1,669)	(\$2,678)	(\$2,678)	(\$3,208)	(\$3,208)
CUMULATIVE COSTS	O&M	(\$112)	(\$112)	(\$161)	(\$161)	(\$160)	(\$160)
CUMULATIVE COSTS	TOTAL COSTS	(\$1,781)	(\$1,781)	(\$2,839)	(\$2,839)	(\$3,368)	(\$3,368)
COST-EFFECTIVENESS	NET PRESENT VALUE	(\$1,619)	(\$1,574)	(\$2,624)	(\$2,585)	(\$3,109)	(\$3,063)
COST-EFFECTIVENESS	BENEFIT-COST RATIO	0.09	0.12	0.08	0.09	0.08	0.09

Note: Positive values represent net social improvements (benefits) while negative values reflect a net cost (disbenefit) to society.

The Final Alternatives could generate several transportation-related benefits, including:

- Travel time savings for passengers that would no longer be subject to automobile congestion, and for existing rail travelers that would experience faster speeds;
- Emissions reductions, vehicle operating cost savings, and reduced pavement damage, as travelers shift from driving to rail;
- Enhanced safety as vehicle miles traveled reductions lead to fewer automobile collisions; and
- Residual capital value remaining at the end of the analysis period.

However, in each of the six cases, the transportation-related benefits, by themselves, would not be sufficient to offset the capital investment required to implement a Final Alternative. It is important to note that the non-transportation benefits listed below were not investigated and are also generally not included in a transportation analysis. However, these topics may be worthy of exploring in greater detail during subsequent phases.

- Economic impacts of project, including increases in jobs, GDP, etc.
- Benefits to freight service
- “Transfers” in the form of fares, tolls, etc.

5. Key Findings

The East-West Passenger Rail Study began the conceptual planning process by evaluating many of the elements that are expected to form the basis of providing passenger rail service across the 151-mile corridor between Pittsfield and Boston. These elements included analysis of the physical characteristics of the route, representative services delivered by the train operations, and potential ridership and travel characteristics. While the Study began by considering a wide range of alternatives and developed six in some detail, this final report has focused on three alternatives, the selection of which reflected guidance from the Advisory Committee. Those three Final Alternatives were analyzed in greater detail.

Key findings from that analysis include:

- A reduction in travel times by as much as one hour over currently feasible times could be possible with new investment in the rail infrastructure between Pittsfield and Boston.
- Those travel time reductions reflect an increasingly higher level of investment made in new infrastructure.
- The potential total travel time from Pittsfield to Boston ranges from an average of 3 hours and 9 minutes to 2 hours and 49 minutes, while the total travel time between Springfield and Boston could be between 1 hour and 57 minutes and 1 hour and 37 minutes.
- Commuter, business, and recreational travel markets are present to varying degrees along the corridor. The study did not examine the possible long-term impacts of the COVID-19 pandemic on travel patterns or demographics.
- On average, roughly 62% of the estimated ridership is expected to be trips between Springfield and Boston.
- East-West train service can operate compatibly with MBTA Worcester/Framingham Line service when the currently planned infrastructure improvements between Worcester and Boston are in place. Fully discussed in Chapter 2, these improvements include completed or ongoing projects (e.g., Worcester Line Positive Train Control Upgrades) and some that have been assumed for the purpose of analysis but for which funding has not yet been identified (e.g., South Station Expansion).
- Passenger rail and CSX operations within an enhanced shared-track environment would require careful coordination of services and clear operational criteria, as well as an agreement with CSX as owner of the line west of Worcester.
- Passenger rail service operated between Springfield and Worcester over an independent alignment adjacent to CSX track(s) appears to be feasible, could eliminate most of the interference between the two types of operations (passenger and freight) in this segment, and could reduce travel time in the segment by 10 minutes. However, building this independent alignment to adhere to CSX requirements for passenger service on their right-of-way adds significant cost and complexity. The estimated capital cost of complying with CSX design criteria is approximately \$1.5 billion. Additional alignment improvements that are expected to save an additional 10 minutes are projected to cost \$765.4 million.
- Development of an independent passenger alignment adjacent to CSX track(s) between Springfield and Pittsfield was not found to be feasible due to its topography and large areas of environmentally protected lands. An enhanced shared track is the only option identified for this portion of the corridor.
- Each alternative offers a set of positive (Pro) and negative (Con) attributes that must be considered to make an informed decision on the overall benefits provided by the alternative. The principal pros and cons of each of the final Alternatives are described in section 5.1.

5.1. Key Trade-offs Among Final Alternatives

This section discusses trade-offs among the Final Alternatives based on the following factors:

- Travel Times / Speeds;
- Passenger / Freight Interference;

- Capital Cost;
- Land Impacts; and
- Grade-Crossing Impacts.

A more detailed description of the pros and cons of each option follows the summary shown in Table 5-1 below.

Table 5-1 – Pros and Cons of Final Alternatives

ALTERNATIVE	3	4	4/5 HYBRID
PROS	• Convenient and comfortable travel • Lowest capital cost • Fewest land impacts • Fewer grade-crossing impacts	• Convenient and comfortable travel • Reduced travel times / faster speeds • Higher ridership • Reduced passenger / freight interference	• Convenient and comfortable travel • Lowest travel times / fastest speeds • Highest ridership • Reduced passenger / freight interference • Fewer grade-crossing impacts
CONS	• Longest travel times / slowest speeds • Lowest ridership • Greatest passenger / freight interference	• Higher capital cost • Greater land impacts • Higher grade-crossing impacts	• Highest capital cost • Greatest land impacts

Alternative 3

Alternative 3 could provide direct passenger rail service between Pittsfield and Boston along a shared track / shared CSX and MBTA corridor. Up to 7 new round trips were evaluated.

• Pros

- **Convenient and comfortable travel:** With up to seven additional round trips each day, service would be more frequent than service currently operating between Pittsfield and Boston. To the extent that capacity is available east of Worcester as a result of the assumed expansion of South Station, peak hour service could be provided in addition to off-peak service. This combination is expected to presumably appeal to the mixture of trip purposes assumed for the corridor – business trips, commuting, and recreation. Given the total travel time, it is assumed that intercity coaches (or equivalent) could be used.

These coaches offer a higher degree of comfort than typical commuter equipment, featuring wider and more comfortable seating, and other amenities.

- **Lowest capital cost:** Infrastructure investments in Alternative 3 would be focused on restoring double track where single track sections exist today, making track and signal system upgrades to the existing tracks in the balance of the route, and construction of new maintenance and station facilities where needed.
- **Fewest land impacts:** Infrastructure improvements in Alternative 3 are expected to be primarily confined to the existing CSX right-of-way on the existing fills or cuts. Moderate land impacts are anticipated, especially at watercourses, to accommodate structures built to new engineering standards. Moderate impacts at the planned Chester and Palmer stations are also anticipated.

- **Fewer grade-crossing impacts:** Grade crossings present safety concerns for rail since conflicts with cars and/or pedestrians cannot be totally eliminated – only warned against and made less likely. However, compared to the other alternatives, the probability of grade crossing incidents is reduced by the slower speeds and lower train frequencies projected for Alternative 3.
- **Cons**
 - **Longest travel times / slowest speeds:** Operations within the existing shared-track environment must conform to CSX freight design criteria with slower maximum curve and average speeds (51 mph Springfield-Worcester). The average scheduled travel time for Alternative 3 between Pittsfield and Boston is expected to be 3 hours and 9 minutes; between Springfield and Boston it is expected to be 1 hour and 57 minutes. West of Worcester, the Springfield to Worcester segment could operate at an average speed of approximately 50 mph, and the Pittsfield to Springfield segment could operate at an average speed of 44 mph.
 - **Lowest ridership:** Ridership forecasts for all three Final Alternatives are based on the demographic profiles used by the federally recognized Metropolitan Planning Organizations for all transportation projects, combined with the projections derived from the two proxy rail services. Train operations are the key variable affecting ridership differences between the Final Alternatives. Forecasted ridership for Final Alternative 3 is the lowest among the three Final Alternatives. The longer travel times dampen ridership demand, although passengers would be able to work and move about on-board so the service could still have some competitive advantages.
 - **Greatest passenger / freight interference:** In Alternative 3 CSX and East-West trains operate in a shared-track environment for 105 miles between Pittsfield and Worcester.

This would require operational cooperation between CSX and the passenger service along the entire route. The substantial volume of freight traffic, differential in operating profiles (speeds/unscheduled operations) and required switching operations all increase the probability of delays, adversely impacting reliability, due to train-to-train conflicts.

Alternative 4

Alternative 4 could provide direct passenger rail service between Pittsfield and Springfield along a shared track in the CSX corridor, along an independent passenger track between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 9 new round trips were evaluated.

- **Pros**
 - **Convenient and comfortable travel:** With up to nine additional round trips each day, service in Alternative 4 would be more frequent. To the extent that capacity is available east of Worcester as a result of the assumed expansion of South Station, peak hour service could be provided in addition to off-peak service. This combination is expected to presumably appeal to the mixture of trip purposes assumed for the corridor – business trips, commuting, and recreation. Given the total travel time, it is assumed that intercity coaches (or equivalent) could be used. These coaches offer a higher degree of comfort than typical commuter equipment.
 - **Reduced travel times / faster speeds:** Travel time to Boston in Alternative 4 could be reduced by approximately 10 minutes compared to Alternative 3 – trips from Springfield to Boston could take 1 hour and 47 minutes and trips to Boston could take 2 hours and 59 minutes from Pittsfield. Operations within the Pittsfield to Springfield section would have to conform to freight design limitations with safety concerns dictating slower maximum speeds and slower speeds through curves.

However, operations along the parallel independent passenger track between Springfield and Worcester could achieve higher maximum speeds, curve speeds, and average speeds (60 mph Springfield-Worcester).

- **Higher ridership:** Forecasted ridership is higher in Alternative 4 compared to Alternative 3 – up to 25% higher across the corridor. The reduced travel times increase forecasted demand, particularly between Springfield and Boston.
- **Reduced passenger / freight interference:** Alternative 4 provides for CSX and East-West trains to operate in a shared-track environment for 51 miles only between Pittsfield and Springfield; a 51% reduction in shared-track operations compared to Alternative 3. The probability of delay (and consequential schedule unreliability) due to train-to-train conflicts is assumed to be reduced proportionately.

- **Cons**

- **Higher capital cost:** The new independent passenger track between Springfield and Worcester in Alternative 4 adds substantial additional capital costs (estimated at \$1.5 billion). This expenditure would be needed to meet CSX's criteria for a shared corridor and higher speeds. Infrastructure investment would also include the construction of new maintenance and station facilities where needed.
- **Greater land impacts:** Infrastructure improvements in Alternative 4 could remain mainly confined to the existing CSX Right of Way between Pittsfield and Springfield. However, the new independent passenger track between Springfield and Worcester would incur greater land impacts where its construction extends beyond the limits of the present alignment of the right-of-way. Moderate impacts are expected to remain with the planned Chester and Palmer stations.
- **Higher grade-crossing impacts:** The faster speeds in the Springfield to Worcester section increase the risk of grade crossing incidents.

Hybrid Alternative 4/5

Hybrid Alternative 4/5 could provide direct passenger rail service between Pittsfield and Springfield along a shared track in the CSX corridor, along an independent passenger track with high-speed short cuts between Springfield and Worcester, and along a shared track/shared MBTA corridor between Worcester and Boston. Up to 9 new round trips were evaluated.

- **Pros**

- **Convenient and comfortable travel:** With up to nine additional round trips each day, service from Alternative 4/5 could be more frequent. To the extent that capacity is available east of Worcester as a result of the assumed expansion of South Station, peak hour service could be provided in addition to off-peak service. This combination would presumably appeal to the mixture of trip purposes assumed for the corridor – business trips, commuting, and recreation. Given the total travel time, it is assumed that intercity coaches (or equivalent) would be used. This is expected to offer a higher degree of comfort than typical commuter equipment.
- **Lowest travel times / fastest speeds:** This alternative provides the fastest speed and lowest overall travel time of the Final Alternatives. All three Final Alternatives have the same constraints, improvements, and speed for the Pittsfield – Springfield segment. However, between Springfield and Worcester Final Alternative 4/5 could provide a parallel, independent, and higher-speed rail line with several strategic realignments to further straighten curves and increase speeds, to an average of 74 mph. This could result in a travel time savings of 20 minutes compared to Alternative 3 and 10 minutes compared to Alternative 4, providing the fastest overall option.
- **Highest ridership:** Forecasted ridership is the greatest of the three alternatives, up to 11% more than Alternative 4.

The substantially reduced travel times notably increased forecasted demand.

- **Reduced passenger / freight interference:** As with Alternative 4, passenger trains in Alternative 4/5 could operate on a separate track between Springfield and Worcester, thus reducing the likelihood of freight/passenger operating conflicts and increasing reliability. The probability of delay due to train-to-train conflicts is reduced proportionately, as is the case with Alternative 4. However, as with Alternative 3 and Alternative 4, CSX and East-West trains would operate in a shared track environment for 51 miles between Pittsfield and Springfield.
- **Fewer grade-crossing impacts:** Alternative 4/5 calls for consolidating three at-grade crossings in the Town of Wilbraham into two overhead bridges (i.e., vehicles travel above the railroad, which would remain at-grade). This could reduce the probability of at-grade crossing incidents in an area with two industrial parcels that feature parking lots for heavy vehicles adjacent to the railroad.

- **Cons**

- **Highest capital cost:** The new independent passenger track plus high-speed short cuts between Springfield and Worcester would require the largest capital investment cost--approximately an additional \$1.5 billion to adhere to CSX design criteria. The additional short cuts in Alternative 4/5 could save approximately 10 minutes in travel time beyond Alternative 4. Additional alignment improvements are projected to cost \$765.4 million. Infrastructure investment is expected to also include the construction of new maintenance and station facilities where needed.
- **Greatest land impacts:** Infrastructure improvements in Alternative 4/5 could remain largely confined to the existing CSX right-of-way between Pittsfield and Springfield. However, construction of the new independent passenger track plus

high-speed short cuts between Springfield and Worcester would mean going outside the existing right-of-way, resulting in the greatest land impacts. Moderate impacts are anticipated to remain with the planned Chester and Palmer stations.

This study has framed three potentially viable Alternatives that could advance one or more of the goals established for passenger rail service between Pittsfield and Boston. The study's Key Findings and Trade-Offs provide a reasonable basis for assessing the pros and cons of each Alternative, particularly the ridership benefits and the capital costs of different project elements.

MassDOT acknowledges the preference of several Advisory Committee members to prioritize the 4/5 hybrid alternative, but at this stage MassDOT recommends keeping Alternatives 3 and 4 under consideration, as additional information may be worth considering before the focus is narrowed to one alternative. Moreover, the necessary next steps outlined in the following Chapter do not require the selection of one alternative.

There is additional work to be done to fully complete the conceptual planning stage for East-West rail service. This work includes discussions with CSX about its requirement for complete separation of the passenger operations from its own tracks, the development of a governance structure for passenger rail outside the MBTA service area, and a more detailed study of economic and community benefits and impacts. These tasks and others could advance opportunities for turning East-West Passenger rail from a subject of study to a project that can be designed, permitted, funded, built, and operated.

6. Next Steps and Recommendations

The East – West Passenger Rail Study is a substantial step forward in realizing the potential for enhanced service within the corridor. The following areas have been identified as next steps to continue advancing the conceptual planning phase for East-West Passenger Rail.

During this time of fiscal uncertainty, MassDOT will review what federal transportation planning grants may be available to support some of the work described in this chapter. These next steps are recommended to gather additional information that could inform the development of an East-West Passenger Rail corridor beyond the analysis contained in this study.

Further Discussion of CSX Requirements

Simply put, CSX policy regarding accommodation of passenger rail service on its right-of-way adds significant cost and complexity because it favors complete separation of the passenger operations from its own tracks whenever possible. The estimated additional capital cost for complying with CSX's design criteria is approximately \$1.5 billion.

Separate track with 30-foot spacing from the existing freight rail is required for any passenger rail operation where train speeds exceed 90 mph. Where shared-track operations occur, CSX requires new and upgraded infrastructure to meet its latest engineering-related policies concerning weight and clearance requirements as well as design standards. Track restoration elements found in the East-West Study assumed wider track centers (distance between two tracks) than historically found along the route as well as replacement of undergrade bridges to comply with the CSX guidance.

This investment would allow passenger and freight to operate with less risk of operational interference but may not necessarily be needed for the speeds described in the various Alternatives or for safe, well-coordinated operations.

Therefore, MassDOT will:

- Continue discussions with CSX to ascertain the basis for their policies and requirements related to shared operations with passenger service and whether their support for an East-West passenger service is possible and, if not, what other options exist;
- Ask CSX to cooperate in additional analysis such as rail capacity modeling and right-of-way condition;
- Seek to conduct a life-cycle cost analysis, if possible, to determine the full spectrum of costs associated with greater control over the right-of-way; and
- As commenters such as the Metropolitan Area Planning Council (MAPC) and the Sierra Club have suggested, a phased approach may be worth considering and discussing with CSX. Phasing has proved useful with other projects in Massachusetts -- most recently the South Coast Rail project. A phased approach could focus on specific improvements that offer benefits such as safety and increased reliability or could address infrastructure in a particular segment. Whether a pilot service would be worthwhile is uncertain given the current operational impediments, but it may be explored as part of a phased approach and could also include working with Amtrak on any plans for service to Albany.

This step is consistent with the suggestions of several Advisory Committee members as well as the written comments of the Berkshire Regional Planning Commission (BRPC).

More Detailed Study of Economic and Community Benefits and Impacts

Several stakeholders have correctly noted this study does not fully capture some of the potentially transformative economic and demographic impacts/benefits of East-West Passenger Rail, i.e., an exploration of long-term demographic and growth patterns for western Massachusetts and how an East-West rail corridor could be one of several focused policies to promote affordable living and economic development in western Massachusetts. This study did not include these important issues because such travel and demographic changes are not captured by a standard transportation analysis, but MassDOT agrees that such an analysis is a critical next step to more fully understand the benefits of East-West rail.

Exploring this issue would require investigation of current and prospective factors affecting regional growth. Such a study would begin with a literature review and an examination of case studies of similar projects elsewhere. The inquiry could then focus on what economic and demographic results were achieved and what other changes – apart from new rail service – were significant contributors to the results.

MassDOT has not yet identified either the state or federal funding to support such a study, though it will develop a rough scope and accompanying cost estimate and then work to identify what federal transportation planning grants may be available to support the work. If funded, MassDOT would look for significant participation in developing the study parameters and assumptions by the Metropolitan Planning Organizations and businesses. That input would be particularly important to assessing factors other than improved train service. These might include changes in regional land use or housing policy.

Several commenters also noted that this study does not consider the long-term travel impacts of the current pandemic – particularly the possibility that remote working will become more common and that for many people the home-work distance will be lengthened.

MassDOT will be evaluating how travel patterns have changed and may continue to change and apply this evaluation in a variety of contexts, not only to the demand for passenger rail but also to issues such as its effects on congestion in greater Boston and potential increases in off-peak travel demand. A new travel option along the East-West corridor could be one of the scenarios examined as part of that broader inquiry.

These analyses may also be useful in determining whether phasing development of the corridor could provide a more viable path forward. For example, because roughly 62% of ridership is generated between Springfield and Boston, this segment may be a worthwhile starting point. While phasing is not likely to be a simple proposition, it could offer an opportunity to respond to one of the most prevalent themes among the commenters, namely an interest in change sooner rather than later.

Understand the Governance Options for Expanded Passenger Rail in Western Massachusetts

There are two main types of passenger rail service operating in the United States: commuter rail and intercity rail. Both types have very different operating characteristics, markets, and funding sources. There is currently no Massachusetts entity with the authority and the capacity to provide either type to the extent that has been analyzed in this study.

MassDOT is not a railroad and does not have the capacity to assume the responsibilities of one. It is not empowered or able to operate either commuter or intercity rail services.

The MBTA is currently the only commuter rail agency in the Commonwealth. Its service district, established by statute, extends no further west than Worcester. As with all commuter rail operations, the focus is on the peak-hour service aimed at commuters, with a majority of riders spending one hour or less on the train.

Amtrak, the nation's intercity passenger railroad, is the only railroad with the right to access rights-of-way owned by freight railroads, although the freight railroad can, and does, demand that Amtrak comply with certain terms as a condition of access. Intercity trips tend to be less focused on peak hours, are typically longer than one hour, and use more comfortable equipment that feature more spacious seating and often a café cart. Amtrak is a national corporation subsidized by the federal government through annual appropriations. MassDOT contracts with Amtrak to provide service – but MassDOT does not oversee or manage the operations.

MassDOT does not have the capacity to operate as a railroad or to manage rail operations, and the MBTA is limited to operations within its legislatively-mandated service area. Given these limitations, a new public governance structure would be needed to support and direct operation of any of the three Final Alternatives, as well as any other non-pilot, permanent passenger rail services in western Massachusetts. These limitations would also be an issue for other passenger rail services within the Commonwealth outside the MBTA's service district. A new passenger rail governance structure would also be necessary if the Valley Flyer pilot and proposed Berkshire Flyer pilot serviced were successful and made permanent.

While the Legislature must ultimately decide how to best address the issue of governance for passenger rail in western Massachusetts, MassDOT would be happy to help advance the public debate and frame the legislative options by convening key elected stakeholders to discuss the legal and policy implications of different governance structures. MassDOT will rely on the input from these stakeholders to scope and develop a white paper to identify options for a governance structure for passenger rail outside the MBTA service district. This white paper could also form the basis of a legislative proposal. This collaboration with legislators will help ensure that policy goals are met and there is a viable mechanism to address governance for passenger rail within the Commonwealth.

While the exact form and substance of the white paper's scope will be determined in consultation with these elected stakeholders, MassDOT expects the work to consider issues such as the following:

- Dispatching all trains and/or coordinating with dispatch operations of other railroads (Figure 6-1).

Figure 6-1 – Eastbound CSX Freight Train Departing Pittsfield (Credit: D. Hoover)



- Legal/regulatory, operational, and financial characteristics of intercity and commuter rail service
- Structure and capacity of public entity to:
 - Evaluate and develop information about options
 - Develop funding and financing strategy, including fare policy
 - Provide management and oversight during
 - a. Construction
 - b. Operation
- Powers and authority of passenger rail entity, including:
 - Legal ability to provide or contract for commuter rail and/or intercity service
 - Technical capacity to provide or contract for commuter rail and or intercity service
 - Eligibility to receive and manage federal and other funds
 - Liability limitations and risks
 - Establishing balance between operating independence and public control
- Life-cycle costs of acquiring and supporting public interest in the right-of-way and related assets
- Funding sources and financing methods
 - Development through construction
 - Operations (including any subsidy required for the assumed fare policy)
 - Maintenance and capital renewal
- Scope of functions to be undertaken by an operating railroad, including:
 - Maintenance of the right-of-way, including stations and layover areas
 - Safety and regulatory compliance

- Securing and maintaining equipment, including locomotives and coaches
- Development of service plan and terms under which schedule can be altered
- Providing security
- Handling ticket sales and fare collection, engaging, and directing personnel
- Operating trains safely and on schedule

Evaluation of Funding Sources and Strategies

The East – West Passenger Rail project is a large and complex project that would require large capital investments as well as ongoing operations and maintenance funding, likely necessitating a combination of many different funding sources and strategies. MassDOT will coordinate efforts with state and federal elected officials and other key stakeholders to evaluate and identify potential funding sources. Project phasing, as discussed earlier, can also be evaluated in context with funding opportunities.

A major impediment to federal funding is the current methodology used by the U.S. Department of Transportation to conduct the benefit-cost analysis. Because the federal methodology considers only a limited range of benefits, the Commonwealth could not obtain any federal funding for South Coast Rail and likely would not qualify for federal funding for East-West Rail. MassDOT will work with the Congressional delegation and other key stakeholders to advocate for changes to the federal benefit-cost analysis method to better capture all of the potential benefits of investment in passenger rail.

MassDOT will also work with elected officials and key stakeholders to catalogue existing and potential federal funding sources, an effort that will depend in part on the findings from the governance white paper with respect to what entity could be the recipient of such funding.

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.0	35.7	0.0	\$0	\$474,721,879	\$0	\$474,721,879	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	17.3	0.0	\$0	\$8,030,050	\$0	\$8,030,050	Length of track improvements divided in half for improvements to half the ROW, minor improvements to ROW to add second track
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.0	1.0	0.0	\$0	\$371,212,000	\$0	\$371,212,000	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	35.7	0.0	\$0	\$95,479,830	\$0	\$95,479,830	single track
10.11a	Track: Realigned									\$0	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	1	3	\$0	\$12,360,000	\$9,012,500	\$21,372,500	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	0	\$0	\$12,360,000	\$0	\$12,360,000	Palmer Station
20.01a	At-grade station improvements to an existing station									\$0	
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station									\$0	
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	3	\$0	\$0	\$9,012,500	\$9,012,500	\$8.5 M for Blandford, \$250k for Lee
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators	ea		0	0	1				\$0	Pedestrian Bridge for Blandford Bus Station, Included within 20.04
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.0	35.7	0.0	\$5,150,000	\$13,390,000	\$0	\$18,540,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	0	\$0	\$13,390,000	\$0	\$13,390,000	Proposed Layover Facility - Springfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITWORK & SPECIAL CONDITIONS			0.0	35.7	0.0	\$0	\$449,655,751	\$0	\$449,655,751	
40.01	Demolition, Clearing, Earthwork									\$0	
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	0.0	35.7	0.0	\$0	\$290,846,250	\$0	\$290,846,250	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	18,771	0	\$0	\$265,464	\$0	\$265,464	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$43	0	470,625	0	\$0	\$20,359,238	\$0	\$20,359,238	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	48,000	0	\$0	\$138,184,800	\$0	\$138,184,800	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.0	35.7	0.0	\$175,100	\$27,804,909	\$0	\$27,980,009	
50.01	Train control and signals									\$0	
50.02	Traffic signals and crossing protection									\$0	
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	35.7	0.0	\$0	\$27,542,259	\$0	\$27,542,259	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	0	\$175,100	\$262,650	\$0	\$437,750	1 for each rail station
50.07	Central Control									\$0	CSX dispatches west of Worcester
10-50.SUB	Construction Subtotal (10-50)			0.0	35.7	0.0	\$5,325,100	\$977,932,539	\$9,012,500	\$992,270,139	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$1,863,785	\$342,276,389	\$3,154,375	\$347,294,548.58	
10-50.TOT	Construction Total						\$7,188,885	\$1,320,208,927	\$12,166,875	\$1,339,564,687	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.0	35.7	0.0	\$0	\$12,197,731	\$0	\$12,197,731	
60.01	Purchase or lease of real estate	sf	\$2.27	0	5,382,935	0	\$0	\$12,197,731	\$0	\$12,197,731	Regardless of ownership, square footage was calculated based on area permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses										
70.00	VEHICLES (number)			6				\$20,909,000		\$20,909,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Bi-Level Coaches)	ea	\$4,120,000	3				\$12,360,000		\$12,360,000	
70.04	Bus	ea	\$566,500	2				\$1,133,000		\$1,133,000	
70.05	Other (Locomotives)	ea	\$7,416,000	1				\$7,416,000		\$7,416,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.0	35.7	0.0	\$2,156,666	\$396,062,678.22	\$3,650,063	\$401,869,406	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.0	35.7	0.0	\$9,345,551	\$1,749,378,336	\$15,816,938	\$1,774,540,824	
90.00	UNALLOCATED CONTINGENCY		10%				\$934,555	\$174,937,834	\$1,581,694	\$177,454,082	
10-90.SUB	Subtotal (10 - 90)			0.0	35.7	0.0	\$10,280,106	\$1,924,316,170	\$17,398,631	\$1,951,994,907	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.0	35.7	0.0	\$10,280,106	\$1,924,316,170	\$17,398,631	\$1,951,994,907	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.0	35.7	0.0	\$0	\$474,721,879	\$0	\$474,721,879	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	17.3	0.0	\$0	\$8,030,050	\$0	\$8,030,050	Length of track improvements divided in half for improvements to half the ROW, minor improvements to ROW to add second track
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.0	1.0	0.0	\$0	\$371,212,000	\$0	\$371,212,000	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	35.7	0.0	\$0	\$95,479,830	\$0	\$95,479,830	single track
10.11a	Track: Realigned									\$0	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	1	3	\$0	\$12,360,000	\$9,012,500	\$21,372,500	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	0	\$0	\$12,360,000	\$0	\$12,360,000	Palmer Station
20.01a	At-grade station improvements to an existing station									\$0	
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station									\$0	
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	3	\$0	\$0	\$9,012,500	\$9,012,500	\$8.5 M for Blandford, \$250k for Lee
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators	ea		0	0	1				\$0	Pedestrian Bridge for Blandford Bus Station, Included within 20.04
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.0	35.7	0.0	\$5,150,000	\$13,390,000	\$0	\$18,540,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	0	\$0	\$13,390,000	\$0	\$13,390,000	Proposed Layover Facility - Springfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITEWORK & SPECIAL CONDITIONS			0.0	35.7	0.0	\$0	\$449,655,751	\$0	\$449,655,751	
40.01	Demolition, Clearing, Earthwork									\$0	
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	0.0	35.7	0.0	\$0	\$290,846,250	\$0	\$290,846,250	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	18,771	0	\$0	\$265,464	\$0	\$265,464	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$43	0	470,625	0	\$0	\$20,359,238	\$0	\$20,359,238	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	48,000	0	\$0	\$138,184,800	\$0	\$138,184,800	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.0	35.7	0.0	\$175,100	\$27,804,909	\$0	\$27,980,009	
50.01	Train control and signals									\$0	
50.02	Traffic signals and crossing protection									\$0	
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	35.7	0.0	\$0	\$27,542,259	\$0	\$27,542,259	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	0	\$175,100	\$262,650	\$0	\$437,750	1 for each rail station
50.07	Central Control									\$0	CSX dispatches west of Worcester
10-50.SUB	Construction Subtotal (10-50)			0.0	35.7	0.0	\$5,325,100	\$977,932,539	\$9,012,500	\$992,270,139	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$1,863,785	\$342,276,389	\$3,154,375	\$347,294,548.58	
10-50.TOT	Construction Total						\$7,188,885	\$1,320,208,927	\$12,166,875	\$1,339,564,687	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.0	35.7	0.0	\$0	\$12,197,731	\$0	\$12,197,731	
60.01	Purchase or lease of real estate	sf	\$2.27	0.0	5,382,935	0	\$0	\$12,197,731	\$0	\$12,197,731	Regardless of ownership, square footage was calculated based on area permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses										
70.00	VEHICLES (number)				29			\$142,397,500		\$142,397,500	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Bi-Level Coaches)	ea	\$5,150,000		23			\$118,450,000		\$118,450,000	
70.04	Bus	ea	\$566,500		3			\$1,699,500		\$1,699,500	
70.05	Other (Locomotives)	ea	\$7,416,000		3			\$22,248,000		\$22,248,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.0	35.7	0.0	\$2,156,666	\$396,062,678.22	\$3,650,063	\$401,869,406	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.0	35.7	0.0	\$9,345,551	\$1,870,866,836	\$15,816,938	\$1,896,029,324	
90.00	UNALLOCATED CONTINGENCY		10%				\$934,555	\$187,086,684	\$1,581,694	\$189,602,932	
10-90.SUB	Subtotal (10 - 90)			0.0	35.7	0.0	\$10,280,106	\$2,057,953,520	\$17,398,631	\$2,085,632,257	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.0	35.7	0.0	\$10,280,106	\$2,057,953,520	\$17,398,631	\$2,085,632,257	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	35.7	15.5	\$27,938,977	\$477,389,167	\$126,158,360	\$631,486,504	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	17.3	7.6	\$0	\$8,030,050	\$3,542,088	\$11,572,138	Length of track improvements divided in half for improvements to half the ROW, minor improvements to ROW to add second track
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	1.0	0.2	\$24,511,549	\$371,212,000	\$80,546,000	\$476,269,549	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	35.7	15.5	\$0	\$95,479,830	\$41,514,072	\$136,993,902	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	20.4	4.3	\$3,427,428	\$2,667,288	\$556,200	\$6,650,916	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	Palmer and Chester Stations
20.01a	At-grade station improvements to an existing station									\$0	
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station									\$0	
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.									\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	35.7	15.5	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITework & SPECIAL CONDITIONS			0.1	35.7	15.5	\$0	\$449,655,751	\$169,868,039	\$619,523,790	
40.01	Demolition, Clearing, Earthwork									\$0	
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	0.0	35.7	15.5	\$0	\$290,846,250	\$126,458,250	\$417,304,500	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	18,771	814	\$0	\$265,464	\$11,512	\$276,975	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$43	0	470,625	204,625	\$0	\$20,359,238	\$8,852,078	\$29,211,315	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	48,000	12,000	\$0	\$138,184,800	\$34,546,200	\$172,731,000	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	35.7	15.5	\$175,100	\$63,648,909	\$12,150,313	\$75,974,322	
50.01	Train control and signals	ea	\$1,236,000		23			\$28,428,000		\$28,428,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		30			\$7,416,000		\$7,416,000	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	35.7	15.5	\$0	\$27,542,259	\$11,975,213	\$39,517,472	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	2	\$175,100	\$262,650	\$175,100	\$612,850	1 for each rail station
50.07	Central Control									\$0	CSX dispatches west of Worcester
10-50.SUB	Construction Subtotal (10-50)			0.1	35.7	15.5	\$33,264,077	\$1,016,443,827	\$333,926,712	\$1,383,634,616	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$355,755,339	\$116,874,349	\$484,272,116	
10-50.TOT	Construction Total						\$44,906,503	\$1,372,199,166	\$450,801,062	\$1,867,906,731	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	35.7	15.5	\$0	\$12,197,731	\$4,406,856	\$16,604,587	
60.01	Purchase or lease of real estate	sf	\$2.27	0	5,382,935	1,944,773	\$0	\$12,197,731	\$4,406,856	\$16,604,587	Regardless of ownership, square footage was calculated based on area permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses										
70.00	VEHICLES (number)				28			\$131,840,000		\$131,840,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Single-Level Coaches)	ea	\$4,120,000		23			\$94,760,000		\$94,760,000	
70.04	Bus									\$0	
70.05	Other (Locomotives)	ea	\$7,416,000		5			\$37,080,000		\$37,080,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	35.7	15.5	\$13,471,951	\$411,659,749.86	\$135,240,319	\$560,372,019	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.1	35.7	15.5	\$58,378,454	\$1,927,896,647	\$590,448,236	\$2,576,723,338	
90.00	UNALLOCATED CONTINGENCY		10%				\$5,837,845	\$192,789,665	\$59,044,824	\$257,672,334	
10-90.SUB	Subtotal (10 - 90)			0.1	35.7	15.5	\$64,216,300	\$2,120,686,311	\$649,493,060	\$2,834,395,671	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.1	35.7	15.5	\$64,216,300	\$2,120,686,311	\$649,493,060	\$2,834,395,671	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	55.3	15.5	\$27,938,977	\$814,661,692	\$129,700,448	\$972,301,117	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	52.7	15.3	\$0	\$24,434,804	\$7,084,176	\$31,518,980	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	1.7	0.2	\$24,511,549	\$642,266,800	\$80,546,000	\$747,324,349	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill				0.8					\$0	assume 50 ft of retained section appraching each end of the undergrade structures
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	55.3	15.5	\$0	\$147,960,088	\$41,514,072	\$189,474,160	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	0.0	4.3	\$3,427,428	\$0	\$556,200	\$3,983,628	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	3	1	\$0	\$15,965,000	\$12,360,000	\$28,325,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	Palmer and Chester Stations
20.01a	At-grade station improvements to an existing station	ea	\$1,545,000	0	1	0	\$0	\$1,545,000	\$0	\$1,545,000	Upgrade to Worcester
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station	ea	\$2,060,000	0	1	0	\$0	\$2,060,000	\$0	\$2,060,000	Upgrade to Springfield
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.									\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	55.3	15.5	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITework & SPECIAL CONDITIONS			0.1	55.3	15.5	\$0	\$891,271,738	\$167,760,402	\$1,059,032,140	
40.01	Demolition, Clearing, Earthwork	cy	\$49		3,150,000			\$155,736,000		\$155,736,000	
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	0.0	55.3	15.5	\$0	\$450,709,192	\$126,458,250	\$577,167,442	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	363,943	814	\$0	\$5,146,843	\$11,512	\$5,158,354	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$33	0	729,303	204,625	\$0	\$24,037,824	\$6,744,440	\$30,782,264	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	88,800	12,000	\$0	\$255,641,880	\$34,546,200	\$290,188,080	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	55.3	15.5	\$175,100	\$79,302,445	\$12,150,313	\$91,627,858	
50.01	Train control and signals	ea	\$1,236,000		23			\$28,428,000		\$28,428,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		30			\$7,416,000		\$7,416,000	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	55.3	15.5	\$0	\$42,680,795	\$11,975,213	\$54,656,008	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	2	\$175,100	\$262,650	\$175,100	\$612,850	1 for each rail station
50.07	Central Control	ea	\$515,000		1			\$515,000		\$515,000	Separate track, new Central Control needed
10-50.SUB	Construction Subtotal (10-50)			0.1	55.3	15.5	\$33,264,077	\$1,814,590,875	\$335,361,163	\$2,183,216,115	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$635,106,806	\$117,376,407	\$764,125,640	
10-50.TOT	Construction Total						\$44,906,503	\$2,449,697,681	\$452,737,570	\$2,947,341,755	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	55.3	15.5	\$0	\$37,237,679	\$4,406,856	\$41,644,535	
60.01	Purchase or lease of real estate	sf	\$2.27	0	13,951,403	1,944,773	\$0	\$31,613,879	\$4,406,856	\$36,020,735	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses	ea	\$61,800	0	91	0	\$0	\$5,623,800	\$0	\$5,623,800	Count of primary buildings/structures that would be permanently impacted by improvements
70.00	VEHICLES (number)				33			\$155,736,000		\$155,736,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Single-Level Coaches)	ea	\$4,120,000		27			\$111,240,000		\$111,240,000	
70.04	Bus									\$0	
70.05	Other (Locomotives)	ea	\$7,416,000		6			\$44,496,000		\$44,496,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	55.3	15.5	\$13,471,951	\$734,909,304	\$135,821,271	\$884,202,526	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.1	55.3	15.5	\$58,378,454	\$3,377,580,665	\$592,965,697	\$4,028,924,816	
90.00	UNALLOCATED CONTINGENCY		10%				\$5,837,845	\$337,758,066	\$59,296,570	\$402,892,482	
10-90.SUB	Subtotal (10 - 90)			0.1	55.3	15.5	\$64,216,300	\$3,715,338,731	\$652,262,267	\$4,431,817,298	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.1	55.3	15.5	\$64,216,300	\$3,715,338,731	\$652,262,267	\$4,431,817,298	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	52.1	0.0	\$27,938,977	\$1,284,276,192	\$0	\$1,312,215,168	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	49.1	0.0	\$0	\$22,737,555	\$0	\$22,737,555	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	3.0	0.0	\$24,511,549	\$1,122,040,800	\$0	\$1,146,552,349	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	52.1	0.0	\$0	\$139,497,837	\$0	\$139,497,837	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	0.0	0.0	\$3,427,428	\$0	\$0	\$3,427,428	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	2	3	\$0	\$3,605,000	\$9,012,500	\$12,617,500	
20.01	At-grade station, stop, shelter, mall, terminal, platform									\$0	
20.01a	At-grade station improvements to an existing station	ea	\$1,545,000	0	1	0	\$0	\$1,545,000	\$0	\$1,545,000	Upgrade to Worcester
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station	ea	\$2,060,000	0	1	0	\$0	\$2,060,000	\$0	\$2,060,000	Upgrade to Springfield
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	3	\$0	\$0	\$9,012,500	\$9,012,500	\$8.5 M for Blandford, \$250k for Lee
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators					1				\$0	Pedestrian Bridge for Blandford Bus Station, Included within 20.04
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	52.1	0.0	\$5,150,000	\$13,390,000	\$0	\$18,540,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	0	\$0	\$13,390,000	\$0	\$13,390,000	Proposed Layover Facility - Springfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITework & SPECIAL CONDITIONS			0.1	52.1	0.0	\$0	\$1,140,416,345	\$0	\$1,140,416,345	
40.01	Demolition, Clearing, Earthwork	cy	\$49		8,700,000			\$430,128,000		\$430,128,000	
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	0.0	52.1	0.0	\$0	\$424,931,871	\$0	\$424,931,871	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	498,629	0	\$0	\$7,051,561	\$0	\$7,051,561	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$33	0	687,592	0	\$0	\$22,663,033	\$0	\$22,663,033	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	88,800	0	\$0	\$255,641,880	\$0	\$255,641,880	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	52.1	0.0	\$175,100	\$78,257,061	\$0	\$78,432,161	
50.01	Train control and signals	ea	\$1,236,000		28			\$34,608,000		\$34,608,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		11			\$2,719,200		\$2,719,200	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	52.1	0.0	\$0	\$40,239,761	\$0	\$40,239,761	
50.06	Fare collection system and equipment	ea	\$87,550	2	2	0	\$175,100	\$175,100	\$0	\$350,200	1 for each rail station
50.07	Central Control	ea	\$515,000		1			\$515,000		\$515,000	Separate track, new Central Control needed
10-50.SUB	Construction Subtotal (10-50)			0.1	52.1	0.0	\$33,264,077	\$2,519,944,598	\$9,012,500	\$2,562,221,174	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$881,980,609	\$3,154,375	\$896,777,411	
10-50.TOT	Construction Total						\$44,906,503	\$3,401,925,207	\$12,166,875	\$3,458,998,585	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	52.1	0.0	\$0	\$37,538,150	\$0	\$37,538,150	
60.01	Purchase or lease of real estate	sf	\$2.27	0	13,756,730	0	\$0	\$31,172,750	\$0	\$31,172,750	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses	ea	\$61,800	0	103	0	\$0	\$6,365,400	\$0	\$6,365,400	Count of primary buildings/structures that would be permanently impacted by improvements
70.00	VEHICLES (number)				21			\$82,194,000		\$82,194,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Single-Level Coaches)	ea	\$4,120,000		14			\$57,680,000		\$57,680,000	
70.04	Bus	ea	\$566,500		4			\$2,266,000		\$2,266,000	
70.05	Other (Locomotives)	ea	\$7,416,000		3			\$22,248,000		\$22,248,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	52.1	0.0	\$13,471,951	\$1,020,577,562	\$3,650,063	\$1,037,699,576	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.1	52.1	0.0	\$58,378,454	\$4,542,234,919	\$15,816,938	\$4,616,430,311	
90.00	UNALLOCATED CONTINGENCY		10%				\$5,837,845	\$454,223,492	\$1,581,694	\$461,643,031	
10-90.SUB	Subtotal (10 - 90)			0.1	52.1	0.0	\$64,216,300	\$4,996,458,411	\$17,398,631	\$5,078,073,342	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.1	52.1	0.0	\$64,216,300	\$4,996,458,411	\$17,398,631	\$5,078,073,342	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	QUANTITY - PIT-SPG	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		35.0	46.2	52.1	\$2,938,250,260	\$2,856,998,101	\$2,979,022,513	\$8,774,270,875	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	27.6	39.2	44.9	\$12,813,141	\$18,158,139	\$20,802,898	\$51,774,179	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	7.4	7.0	7.2	\$2,737,723,520	\$2,591,480,000	\$2,679,030,000	\$8,008,233,520	current aerial structure (16,500) + potential aerial structure (97,838)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	70.1	92.4	104.3	\$187,713,598	\$247,359,962	\$279,189,615	\$714,263,176	single track for the entire alignment (does not include "other improvements" section near South Station) x2
10.11a	Track: Realigned									\$0	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			1	3	3	\$1,854,000	\$16,274,000	\$51,294,000	\$69,422,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$24,720,000	0	1	2	\$0	\$12,360,000	\$49,440,000	\$61,800,000	\$12 M for Palmer, \$24 M each for Blandford and Lee Stations
20.01a	At-grade station improvements to an existing station	ea	\$1,854,000	1	1	1	\$1,854,000	\$1,854,000	\$1,854,000	\$5,562,000	Upgrades to Back Bay, Worcester, and Pittsfield
20.02	Aerial station, stop, shelter, mall, terminal, platform									\$0	
20.02a	Aerial station improvements to an existing station	ea	\$2,060,000	0	1	0	\$0	\$2,060,000	\$0	\$2,060,000	Upgrade to Springfield
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.									\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			35.0	46.2	52.1	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITWORK & SPECIAL CONDITIONS			35.0	46.2	52.1	\$393,531,254	\$2,731,081,651	\$480,166,986	\$3,604,779,891	
40.01	Demolition, Clearing, Earthwork	cy	\$49	46,600,000			\$2,303,904,000			\$2,303,904,000	Calculated by Civil 3D corridor model. Approx. 7M cy, 8M cy, 15M cy of total cut by segment of which 5%, 10%, 30% assumed rock cut in segments 1, 2, 3 respectively. 16M cy total fill.
40.02	Site Utilities, Utility Relocation	mi	\$8,157,600	35.0	46.2	52.1	\$285,902,250	\$376,748,250	\$425,227,260	\$1,087,877,760	Assume \$1500/ft (Urban)
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	669,642	190,866	1,304,100	\$9,470,004	\$2,699,201	\$18,442,458	\$30,611,664	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$33	462,625	609,625	688,070	\$15,248,120	\$20,093,240	\$22,678,787	\$58,020,147	Assume 25% of total length of proposed track - assume 10ft height
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	28,800	9,600	4,800	\$82,910,880	\$27,636,960	\$13,818,480	\$124,366,320	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			35.0	46.2	52.1	\$110,384,415	\$168,596,956	\$166,479,780	\$445,461,150	
50.01	Train control and signals	ea	\$1,236,000	15			\$18,540,000			\$18,540,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200	4			\$988,800			\$988,800	# of at-grade crossings
50.03	Traction power supply: substations	ea	\$412,000	6	8	9	\$2,543,918	\$3,445,948	\$3,854,021	\$9,843,887	assume 6 mile spacing for the length of electrified track
50.04	Traction power distribution: catenary and third rail	mi	\$2,175,360	37.0	50.2	56.1	\$80,591,320	\$109,167,640	\$122,095,376	\$311,854,336	catenary for double track - assume length of track construction, plus 10 miles to electrify the remaining distance to South Station
50.05	Communications	mi	\$772,500	35.0	46.2	52.1	\$27,074,077	\$35,676,918	\$40,267,733	\$103,018,727	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	3	\$175,100	\$262,650	\$262,650	\$700,400	1 for each rail station
50.07	Central Control	ea	\$515,000	1			\$515,000			\$515,000	All new track requires Central Control
10-50.SUB	Construction Subtotal (10-50)			35.0	46.2	52.1	\$3,449,169,929	\$5,786,340,709	\$3,690,353,279	\$12,925,863,916	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$1,207,209,475	\$2,025,219,248	\$1,291,623,648	\$4,524,052,371	
10-50.TOT	Construction Total						\$4,656,379,404	\$7,811,559,957	\$4,981,976,926	\$17,449,916,286	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			35.0	46.2	52.1	\$24,366,013	\$38,438,882	\$38,597,538	\$101,402,434	
60.01	Purchase or lease of real estate	sf	\$1.55	14,290,883	20,759,535	22,342,225	\$22,079,413	\$32,073,482	\$34,518,738	\$88,671,634	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses	ea	\$61,800	37	103	66	\$2,286,600	\$6,365,400	\$4,078,800	\$12,730,800	Count of primary buildings/structures that would be permanently impacted by improvements
70.00	VEHICLES (number)			8			\$370,800,000			\$370,800,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Electric Trainsets)	ea	\$46,350,000	8			\$370,800,000			\$370,800,000	
70.04	Bus									\$0	
70.05	Other									\$0	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	35.0	46.2	52.1	\$1,396,913,821	\$2,343,467,987	\$1,494,593,078	\$5,234,974,886	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			35.0	46.2	52.1	\$6,077,659,238	\$10,564,266,826	\$6,515,167,542	\$23,157,093,606	
90.00	UNALLOCATED CONTINGENCY		10%				\$607,765,924	\$1,056,426,683	\$651,516,754	\$2,315,709,361	
10-90.SUB	Subtotal (10 - 90)			35.0	46.2	52.1	\$6,685,425,162	\$11,620,693,508	\$7,166,684,296	\$25,472,802,967	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			35.0	46.2	52.1	\$6,685,425,162	\$11,620,693,508	\$7,166,684,296	\$25,472,802,967	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - PIT-SPG	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	35.7	15.5	\$27,938,977	\$485,419,217	\$129,700,448	\$643,058,642	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	34.6	15.3	\$0	\$16,060,099	\$7,084,176	\$23,144,276	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	1.0	0.2	\$24,511,549	\$371,212,000	\$80,546,000	\$476,269,549	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	35.7	15.5	\$0	\$95,479,830	\$41,514,072	\$136,993,902	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	20.4	4.3	\$3,427,428	\$2,667,288	\$556,200	\$6,650,916	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	Palmer and Chester Stations
20.01a	At-grade station improvements to an existing station	ea		0	0	0	\$0	\$0	\$0	\$0	
20.02	Aerial station, stop, shelter, mall, terminal, platform	ea		0	0	0	\$0	\$0	\$0	\$0	
20.02a	Aerial station improvements to an existing station	ea		0	0	0	\$0	\$0	\$0	\$0	
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	0	\$0	\$0	\$0	\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	35.7	15.5	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITWORK & SPECIAL CONDITIONS			0.1	35.7	15.5	\$0	\$333,603,694	\$116,095,859	\$449,699,553	
40.01	Demolition, Clearing, Earthwork									\$0	
40.02	Site Utilities, Utility Relocation	mi		0.0	35.7	15.5				\$0	Assume \$1500/ft (Urban) and \$400/ft (Rural)
40.02a	Utility Relocation: Existing RR ROW, Rural	mi	\$2,175,360	0.0	19.4	9.0	\$0	\$42,200,748	\$19,553,520	\$61,754,268	
40.02b	Utility Relocation: Existing RR ROW, Urban	mi	\$8,157,600	0.0	16.3	6.5	\$0	\$132,593,445	\$53,132,550	\$185,725,995	
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	18,771	814	\$0	\$265,464	\$11,512	\$276,975	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$43	0	470,625	204,625	\$0	\$20,359,237.50	\$8,852,078	\$29,211,315	\$43/SF cost for WOR to SPR only, \$33/SF used for SPR to PIT
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	48,000	12,000	\$0	\$138,184,800	\$34,546,200	\$172,731,000	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	35.7	15.5	\$175,100	\$63,648,909	\$12,150,313	\$75,974,322	
50.01	Train control and signals	ea	\$1,236,000		23			\$28,428,000		\$28,428,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		30			\$7,416,000		\$7,416,000	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	35.7	15.5	\$0	\$27,542,259	\$11,975,213	\$39,517,472	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	2	\$175,100	\$262,650	\$175,100	\$612,850	1 for each rail station
50.07	Central Control									\$0	CSX dispatches west of Worcester
10-50.SUB	Construction Subtotal (10-50)			0.1	35.7	15.5	\$33,264,077	\$908,421,820	\$283,696,621	\$1,225,382,517	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$317,947,637	\$99,293,817	\$428,883,881	
10-50.TOT	Construction Total						\$44,906,503	\$1,226,369,456	\$382,990,438	\$1,654,266,398	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	35.7	15.5	\$0	\$12,197,731	\$4,406,856	\$16,604,587	
60.01	Purchase or lease of real estate	sf	\$2.27	0	5,382,935	1,944,773	\$0	\$12,197,731	\$4,406,856	\$16,604,587	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses									\$0	
70.00	VEHICLES (number)				28			\$131,840,000		\$131,840,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Bi-Level Coaches)	ea	\$4,120,000		23			\$94,760,000		\$94,760,000	
70.04	Bus									\$0	
70.05	Other (Locomotives)	ea	\$7,416,000		5			\$37,080,000		\$37,080,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	35.7	15.5	\$13,471,951	\$367,910,837	\$114,897,131	\$496,279,919	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.1	35.7	15.5	\$58,378,454	\$1,738,318,024	\$502,294,425	\$2,298,990,903	
90.00	UNALLOCATED CONTINGENCY		5%				\$2,918,923	\$86,915,901	\$25,114,721	\$114,949,545	
10-90.SUB	Subtotal (10 - 90)			0.1	35.7	15.5	\$61,297,377	\$1,825,233,925	\$527,409,146	\$2,413,940,449	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.1	35.7	15.5	\$61,297,377	\$1,825,233,925	\$527,409,146	\$2,413,940,449	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - PIT-SPG	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	55.3	15.5	\$27,938,977	\$814,661,692	\$129,700,448	\$972,301,117	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	52.7	15.3	\$0	\$24,434,804	\$7,084,176	\$31,518,980	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	1.7	0.2	\$24,511,549	\$642,266,800	\$80,546,000	\$747,324,349	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill				0.8					\$0	assume 50 ft of retained section apprching each end of the undergrade structures
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	55.3	15.5	\$0	\$147,960,088	\$41,514,072	\$189,474,160	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	0.0	4.3	\$3,427,428	\$0	\$556,200	\$3,983,628	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	3	1	\$0	\$15,965,000	\$12,360,000	\$28,325,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	Palmer and Chester Stations
20.01a	At-grade station improvements to an existing station	ea	\$1,545,000	0	1	0	\$0	\$1,545,000	\$0	\$1,545,000	Upgrade to Worcester
20.02	Aerial station, stop, shelter, mall, terminal, platform	ea		0	0	0	\$0	\$0	\$0	\$0	
20.02a	Aerial station improvements to an existing station	ea	\$2,060,000	0	1	0	\$0	\$2,060,000	\$0	\$2,060,000	Upgrade to Springfield
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	0	\$0	\$0	\$0	\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	55.3	15.5	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITework & SPECIAL CONDITIONS			0.1	55.3	15.5	\$0	\$741,891,172	\$116,095,859	\$857,987,031	
40.01	Demolition, Clearing, Earthwork	cy	\$49		3,150,000			\$155,736,000		\$155,736,000	
40.02	Site Utilities, Utility Relocation	mi		0.0	55.3	15.5				\$0	Assume \$1500/ft (Urban) and \$400/ft (Rural)
40.02a	Utility Relocation: Existing RR ROW, Rural	mi	\$2,175,360	0.0	25.0	9.0	\$0	\$54,320,206	\$19,553,520	\$73,873,726	
40.02b	Utility Relocation: Existing RR ROW, Urban	mi	\$8,157,600	0.0	30.3	6.5	\$0	\$247,008,420	\$53,132,550	\$300,140,970	
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	SF	\$14	0	363,943	814	\$0	\$5,146,843	\$11,512	\$5,158,354	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$33	0	729,303	204,625	\$0	\$24,037,824	\$8,852,078	\$32,889,901	\$33/SF cost for WOR to SPR only, \$43/SF used for SPR to PIT
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879	0	88,800	12,000	\$0	\$255,641,880	\$34,546,200	\$290,188,080	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	55.3	15.5	\$175,100	\$79,302,445	\$12,150,313	\$91,627,858	
50.01	Train control and signals	ea	\$1,236,000		23			\$28,428,000		\$28,428,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		30			\$7,416,000		\$7,416,000	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	55.3	15.5	\$0	\$42,680,795	\$11,975,213	\$54,656,008	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	2	\$175,100	\$262,650	\$175,100	\$612,850	1 for each rail station
50.07	Central Control	ea	\$515,000		1			\$515,000		\$515,000	Separate track, new Central Control needed
10-50.SUB	Construction Subtotal (10-50)			0.1	55.3	15.5	\$33,264,077	\$1,665,210,309	\$283,696,621	\$1,982,171,006	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$582,823,608	\$99,293,817	\$693,759,852	
10-50.TOT	Construction Total						\$44,906,503	\$2,248,033,917	\$382,990,438	\$2,675,930,858	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	55.3	15.5	\$0	\$37,237,626	\$4,406,856	\$41,644,482	
60.01	Purchase or lease of real estate	sf	\$2.27	0	13,951,380	1,944,773	\$0	\$31,613,826	\$4,406,856	\$36,020,682	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses	ea	\$61,800	0	91	0	\$0	\$5,623,800	\$0	\$5,623,800	Count of primary buildings/structures that would be permanently impacted by improvements
70.00	VEHICLES (number)				33			\$155,736,000		\$155,736,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Bi-Level Coaches)	ea	\$4,120,000		27			\$111,240,000		\$111,240,000	
70.04	Bus									\$0	
70.05	Other (Locomotives)	ea	\$7,416,000		6			\$44,496,000		\$44,496,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	55.3	15.5	\$13,471,951	\$674,410,175	\$114,897,131	\$802,779,257	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.1	55.3	15.5	\$58,378,454	\$3,115,417,718	\$502,294,425	\$3,676,090,597	
90.00	UNALLOCATED CONTINGENCY		5%				\$2,918,923	\$155,770,886	\$25,114,721	\$183,804,530	
10-90.SUB	Subtotal (10 - 90)			0.1	55.3	15.5	\$61,297,377	\$3,271,188,604	\$527,409,146	\$3,859,895,127	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.1	55.3	15.5	\$61,297,377	\$3,271,188,604	\$527,409,146	\$3,859,895,127	

SCC Code	SCC Item Name	Unit	Unit Cost (\$2020)	QUANTITY - PIT-SPG	QUANTITY - WOR-BOS	QUANTITY - SPG-WOR	COST - WOR-BOS	COST - SPG-WOR	COST - PIT-SPG	TOTAL COST - PIT - BOS	SCC Item Description
10.00	GUIDEWAY & TRACK ELEMENTS (route miles)	mi		0.1	52.8	15.5	\$27,938,977	\$1,201,106,608	\$129,700,448	\$1,358,746,033	
10.01	Guideway: At-grade exclusive right-of-way	mi	\$463,500	0.0	50.0	15.3	\$0	\$23,161,481	\$7,084,176	\$30,245,657	Length of proposed track - assume full guideway efforts
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)									\$0	
10.03	Guideway: At-grade in mixed traffic									\$0	
10.04	Guideway: Aerial structure	mi	\$369,811,200	0.1	2.8	0.2	\$24,511,549	\$1,036,592,000	\$80,546,000	\$1,141,649,549	current undergrade bridges (does not include track)
10.05	Guideway: Built-up fill									\$0	
10.06	Guideway: Underground cut & cover									\$0	
10.07	Guideway: Underground tunnel									\$0	
10.08	Guideway: Retained cut or fill									\$0	assume 50 ft of retained section appraching each end of the undergrade structures
10.09	Track: Direct fixation									\$0	
10.10	Track: Embedded									\$0	
10.11	Track: Ballasted	mi	\$2,678,000	0.0	52.8	15.5	\$0	\$141,328,407	\$41,514,072	\$182,842,479	single track (includes "other improvements")
10.11a	Track: Realigned	mi	\$130,522	26.3	0.2	4.3	\$3,427,428	\$24,720	\$556,200	\$4,008,348	Assumed realignment of tracks along curvature to increase allowable speed
10.12	Track: Special (switches, turnouts)									\$0	
10.13	Track: Vibration and noise dampening									\$0	
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL (number)			0	3	1	\$0	\$15,965,000	\$12,360,000	\$28,325,000	
20.01	At-grade station, stop, shelter, mall, terminal, platform	ea	\$12,360,000	0	1	1	\$0	\$12,360,000	\$12,360,000	\$24,720,000	Palmer and Chester Stations
20.01a	At-grade station improvements to an existing station	ea	\$1,545,000	0	1	0	\$0	\$1,545,000	\$0	\$1,545,000	Upgrade to Worcester
20.02	Aerial station, stop, shelter, mall, terminal, platform	ea		0	0	0	\$0	\$0	\$0	\$0	
20.02a	Aerial station improvements to an existing station	ea	\$2,060,000	0	1	0	\$0	\$2,060,000	\$0	\$2,060,000	Upgrade to Springfield
20.03	Underground station, stop, shelter, mall, terminal, platform									\$0	
20.04	Other stations, landings, terminals: Intermodal, ferry, trolley, etc.	ea		0	0	0	\$0	\$0	\$0	\$0	
20.05	Joint development									\$0	
20.06	Automobile parking multi-story structure									\$0	
20.07	Elevators, escalators									\$0	
30.00	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS			0.1	52.8	15.5	\$5,150,000	\$13,390,000	\$13,390,000	\$31,930,000	
30.01	Administration Building: Office, sales, storage, revenue counting									\$0	
30.02	Light Maintenance Facility									\$0	
30.03	Heavy Maintenance Facility									\$0	
30.04	Storage or Maintenance of Way Building	ea	\$13,390,000	0	1	1	\$0	\$13,390,000	\$13,390,000	\$26,780,000	Proposed Layover Facility - Springfield and Pittsfield
30.05	Yard and Yard Track	Track	\$2,575,000	2	0	0	\$5,150,000	\$0	\$0	\$5,150,000	Proposed Layover Facility Mod - Boston - Assume 2 tracks on an existing yard
40.00	SITework & SPECIAL CONDITIONS			0.1	52.8	15.5	\$0	\$773,339,326	\$116,095,859	\$889,435,186	
40.01	Demolition, Clearing, Earthwork	cy	\$49		3,927,373			\$194,169,339		\$194,169,339	
40.02	Site Utilities, Utility Relocation	mi		0.0	52.4	15.5				\$0	Assume \$1500/ft (Urban) and \$400/ft (Rural)
40.02a	Utility Relocation: Existing RR ROW, Rural	mi	\$2,175,360	0.0	22.1	9.0	\$0	\$48,109,240	\$19,553,520	\$67,662,760	
40.02b	Utility Relocation: Existing RR ROW, Urban	mi	\$8,157,600	0.0	30.3	6.5	\$0	\$247,008,420	\$53,132,550	\$300,140,970	
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments									\$0	
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	sf	\$14		385,381	814	\$0	\$5,450,017	\$11,512	\$5,461,529	Wetlands only. Does not include impacts to open water, Article 97 Lands, flood hazard areas, NHESP habitat, or ACEC areas.
40.05	Site structures including retaining walls, sound walls	SF	\$33	0	696,615	204,625	\$0	\$22,960,430	\$8,852,078	\$31,812,508	\$33/SF cost for WOR to SPR only, \$43/SF used for SPR to PIT
40.06	Pedestrian / bike access and accommodation, landscaping									\$0	
40.07	Automobile, bus, van accessways including roads, parking lots	SF	\$2,879		88,800	12,000	\$0	\$255,641,880	\$34,546,200	\$290,188,080	Overhead roadway bridge, SF of superstructure to include substructure elements (Abutment, foundations, piers, and wing walls)
40.08	Temporary Facilities and other indirect costs during construction									\$0	
50.00	SYSTEMS			0.1	52.8	15.5	\$175,100	\$76,647,860	\$12,150,313	\$88,973,273	
50.01	Train control and signals	ea	\$1,236,000		23			\$28,428,000		\$28,428,000	# of CPs
50.02	Traffic signals and crossing protection	ea	\$247,200		27			\$6,674,400		\$6,674,400	# of at-grade crossings
50.03	Traction power supply: substations									\$0	
50.04	Traction power distribution: catenary and third rail									\$0	
50.05	Communications	mi	\$772,500	0.0	52.8	15.5	\$0	\$40,767,810	\$11,975,213	\$52,743,023	
50.06	Fare collection system and equipment	ea	\$87,550	2	3	2	\$175,100	\$262,650	\$175,100	\$612,850	1 for each rail station
50.07	Central Control	ea	\$515,000		1			\$515,000		\$515,000	Separate track, new Central Control needed
10-50.SUB	Construction Subtotal (10-50)			0.1	52.8	15.5	\$33,264,077	\$2,080,448,794	\$283,696,621	\$2,397,409,491	
10-50.CNT	Construction Contingency (10 - 50) 35%		35%				\$11,642,427	\$728,157,078	\$99,293,817	\$839,093,322	
10-50.TOT	Construction Total						\$44,906,503	\$2,808,605,872	\$382,990,438	\$3,236,502,813	
60.00	ROW, LAND, EXISTING IMPROVEMENTS			0.1	52.8	15.5	\$0	\$37,459,865	\$4,406,856	\$41,866,721	
60.01	Purchase or lease of real estate	sf	\$2.27	0	13,858,546	1,944,773	\$0	\$31,403,465	\$4,406,856	\$35,810,321	Regardless of ownership, square footage was calculated based on area that would be permanently impacted by improvements (i.e., assumes only partial acquisitions)
60.02	Relocation of existing households and businesses	ea	\$61,800	0	98	0	\$0	\$6,056,400	\$0	\$6,056,400	Count of primary buildings/structures that would be permanently impacted by improvements
70.00	VEHICLES (number)				33			\$155,736,000		\$155,736,000	
70.01	Light Rail									\$0	
70.02	Heavy Rail									\$0	
70.03	Commuter Rail (Bi-Level Coaches)		\$4,120,000		27			\$111,240,000		\$111,240,000	
70.04	Bus									\$0	
70.05	Other (Locomotives)		\$7,416,000		6			\$44,496,000		\$44,496,000	
70.06	Non-revenue vehicles									\$0	
70.07	Spare parts									\$0	
80.00	PROFESSIONAL SERVICES (applies to Cats. 10-50)		30%	0.1	52.8	15.5	\$13,471,951	\$842,581,762	\$114,897,131	\$970,950,844	
80.01	Project Development									\$0	
80.02	Engineering									\$0	
80.03	Project Management for Design and Construction									\$0	
80.04	Construction Administration & Management									\$0	
80.05	Professional Liability and other Non-Construction Insurance									\$0	
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.									\$0	
80.07	Surveys, Testing, Investigation, Inspection									\$0	
80.08	Start up									\$0	
10-80.SUB	Subtotal (10 - 80)			0.0	0.0	0.0	\$58,378,454	\$3,844,383,499	\$502,294,425	\$4,405,056,378	
90.00	UNALLOCATED CONTINGENCY		5%				\$2,918,923	\$192,219,175	\$25,114,721	\$220,252,819	
10-90.SUB	Subtotal (10 - 90)			0.0	0.0	0.0	\$61,297,377	\$4,036,602,673	\$527,409,146	\$4,625,309,197	
100.00	FINANCE CHARGES									\$0	
10-100.TOT	Total Project Cost (10 - 100)			0.0	0.0	0.0	\$61,297,377	\$4,036,602,673	\$527,409,146	\$4,625,309,197	

-	Alternative		Alt. 0			Alt. 0			Alt. 1			Alt. 1			Alt. 2			Alt. 2			Alt. 3			Alt. 3							
O&M Item	Metric	Annual Factor	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value								
Amtrak Train Operations	Pay Hrs.	365 Days	112	\$	289	\$	11,795,055		112	\$	289	\$	11,795,055		112	\$	289	\$	11,795,055		112	\$	289	\$	11,795,055						
Amtk Train Support (Mech)	Pay Hrs.	365 Days	72	\$	79	\$	2,076,823		72	\$	79	\$	2,076,823		72	\$	79	\$	2,076,823		72	\$	79	\$	2,076,823						
E/W Train Operations	Pay Hrs.	365 Days	-	\$	-	\$	-		56	\$	176	\$	3,592,202		163	\$	176	\$	10,455,874		230	\$	176	\$	14,753,688						
Amtk Train Support (Mech)	Pay Hrs.	365 Days	-	\$	-	\$	-		37	\$	79	\$	1,067,256		115	\$	79	\$	3,317,148		173	\$	79	\$	4,990,144						
Equipment	Annual Maintenance + Fuel Costs					\$	2,083,433				\$	3,257,406				\$	6,374,670					\$	7,923,496								
Station Maintenance	Annual (% Allocation)					\$	253,380				\$	353,805				\$	652,505					\$	916,700								
Reservations / Ticketing	Annual (% Allocation)					\$	522,313				\$	526,433				\$	728,365					\$	814,370								
Dispatch/Police/Access	Multiple metrics					\$	1,804,537				\$	3,205,327				\$	5,047,106					\$	7,674,540								
Professional Support Staff	Annual (% Allocation)					\$	217,845				\$	334,261				\$	408,266					\$	654,308								
RAIL TOTAL	Annual Rail O&M Costs					\$	18,746,000				\$	26,162,000				\$	40,891,000					\$	51,603,000								
Average One-Way Bus Travel Time								2:25					1:15																		
EB Service - Round Trips	Round Trips	302 Days						4					6																		
EB Service - Veh. Rev. Hrs.	Pay Hrs.	302 Days						9:40					\$	206	\$	601,383	7:30					\$	206	\$	466,590						
WB Service - Round Trips	Round Trips	302 Days						4					6																		
WB Service - Veh. Rev. Hrs.	Pay Hrs.	302 Days						9:40					\$	206	\$	601,383	7:30					\$	206	\$	466,590						
BUS TOTAL	Annual Vehicle Revenue Hours									19:20					\$					1,202,765	15:00					\$					933,180

-			Alternative			Alt. 4			Alt. 5			Alt. 6		
O&M Item	Metric	Annual Factor	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value	Quantity	Unit Cost	\$ Value
Amtrak Train Operations	Pay Hrs.	365 Days	112	\$	289	\$	11,795,055		112	\$	289	\$	11,795,055	
Amtk Train Support (Mech)	Pay Hrs.	365 Days	72	\$	79	\$	2,076,823		72	\$	79	\$	2,076,823	
E/W Train Operations	Pay Hrs.	365 Days	368	\$	176	\$	23,605,901		192	\$	176	\$	12,316,122	
Amtk Train Support (Mech)	Pay Hrs.	365 Days	253	\$	79	\$	7,297,725		167	\$	79	\$	4,817,076	
Equipment	Annual Maintenance + Fuel Costs				\$	9,063,634					\$	6,186,628		
Station Maintenance	Annual (% Allocation)				\$	1,277,200					\$	1,135,575		
Reservations / Ticketing	Annual (% Allocation)				\$	935,961					\$	832,961		
Dispatch/Police/Access	Multiple metrics				\$	8,976,527					\$	7,601,678		
Professional Support Staff	Annual (% Allocation)				\$	708,769					\$	570,878		
RAIL TOTAL	Annual Rail O&M Costs				\$	65,714,000					\$	47,380,000		
Average One-Way Bus Travel Time									1:15					
EB Service - Round Trips	Round Trips	302 Days							11					
EB Service - Veh. Rev. Hrs.	Pay Hrs.	302 Days							13:45			\$ 206 \$ 855,415		
WB Service - Round Trips	Round Trips	302 Days							10					
WB Service - Veh. Rev. Hrs.	Pay Hrs.	302 Days							12:30			\$ 206 \$ 777,650		
BUS TOTAL	Annual Vehicle Revenue Hours								26:15			\$ 1,633,065		

O&M Item	Final Alt. 3	Final Alt. 4	Final Alt. 4/5 Hybrid
E/W Train Operations	\$ 5,528,107	\$ 8,531,239	\$ 8,485,785
Amtrak Train Operations (Lake Shore Ltd)	\$ 2,950,431	\$ 2,950,431	\$ 2,950,431
E/W Equip Maint + Fuel Cost	\$ 7,465,965	\$ 8,799,645	\$ 8,770,901
Dispatch/Police/Track Access	\$ 7,448,455	\$ 8,715,075	\$ 8,602,336
Station Maintenance	\$ 1,052,500	\$ 1,197,500	\$ 1,197,500
Reservations and Ticketing	\$ 973,000	\$ 1,037,500	\$ 1,037,500
Supervision and Support	\$ 766,875	\$ 766,875	\$ 766,875
Insurance and Fees	\$ 1,715,139	\$ 2,095,886	\$ 2,083,642
TOTAL	\$ 27,900,472	\$ 34,094,151	\$ 33,894,970

East-West Passenger Rail Study

Ridership Methodology Report

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1. Introduction

This report presents the methodology used to forecast ridership for the East-West Passenger Rail Study. The East-West Rail corridor connects the Massachusetts cities of Boston and Pittsfield, via Springfield. Included in this analysis are connections to the MBTA Worcester Line, CTDOT and Amtrak service on the Hartford Line from Springfield, MA to New Haven, CT, as well as the Amtrak Vermonter and Lake Shore Limited services. This work builds on the previous study that was undertaken in the region, which examined a similar study area, the Northern New England Intercity Rail Initiative (NNEIRI) Study. This work used the same model from the NNEIRI project as the basis for this analysis, with updated input data and additional geographic coverage to include points west of Springfield.

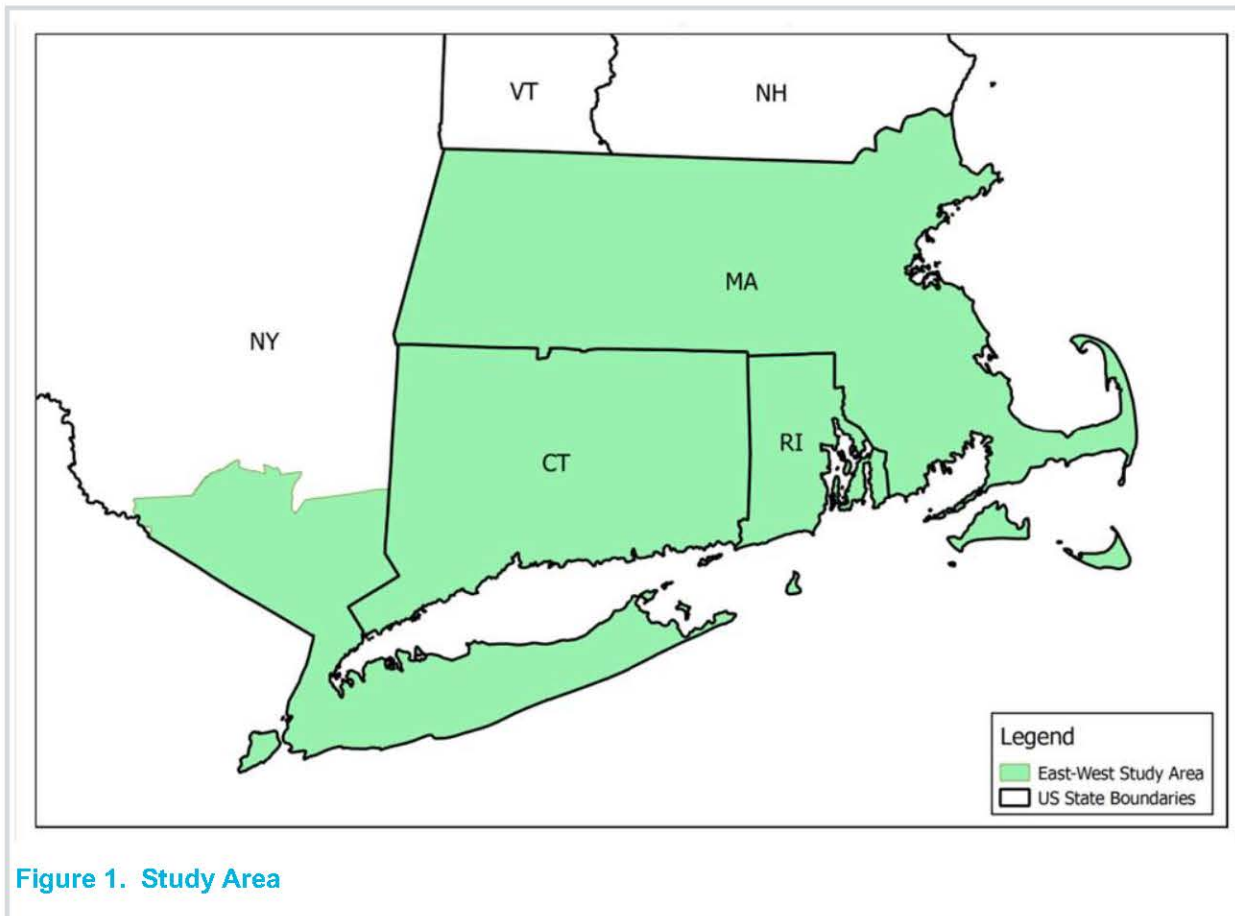
The model utilized for this study is based on travel market data throughout Massachusetts and Connecticut (and the Northeast Corridor), historical rail ridership data and trends, and demographic data. Other models providing a foundation for this study's model includes those developed for Amtrak's Northeast Corridor, Southeast Corridor, California Corridor, Florida and the Midwest States.

2. Study Area Geography

This study area covers the proposed East-West Rail Corridor, connecting Boston to Springfield and Pittsfield, MA, as well as incorporates connecting rail services. This study area includes the states of Massachusetts and Connecticut, as well as the New York metro area (Manhattan, Long Island, and Jersey City, NJ). These services include the following:

- Northeast Regional trains originating in Boston providing service to Springfield, Hartford, and New York, continuing to Washington, D.C.
- Lake Shore Limited trains originating in Boston providing service to Springfield, continuing to Chicago, IL
- Vermonter trains originating in St. Albans, VT providing service to Vermont stations, Springfield, Hartford, and New York
- CTrail Hartford Line trains operating between Springfield and New Haven

The entire project study area can be seen in Figure 1, but the demand is generated based on twenty-mile straight-line buffers around each station, weighted for areas closer to the stations.



3. Travel Demand Model Description

The travel demand modeling approach used in this study was based on a passenger rail incremental model system and used in many previous applications to evaluate proposed intercity and high-speed rail services for several states and Amtrak throughout the country. The travel demand model was originally developed from extensive market research and observed travel volumes and service characteristics by mode, which were conducted/assembled in various study corridor markets including the Northeast, Southeast, and other regions.

The model is an incremental model that only forecasts rail ridership, as opposed to total travel by all modes. The model pivots off existing ridership and service by station pair, and the forecasts are based on demographic growth and service characteristics such as departure/arrival times of day, travel time between station pairs and train headways. In cases where there is no existing service, a proxy station pair is assigned that has similar characteristics to the new station pair (such as distance between stations and market size), and the base ridership is adjusted to account for differences in market size and service. Each train is modeled separately, which allows for time-of-day factoring for both departure and arrival times. Connections are explicitly modeled and factored lower to reflect the lower appeal of a required transfer.

The model incorporates the Amtrak service and other rail service in the region, such as connecting MBTA trains and bus service, as well as potential connections in the Amtrak network. The model has been thoroughly calibrated and updated to effectively evaluate extensions to the current system and connections with both Amtrak and the MBTA Worcester Line. The model calibration is described in more details in Section 5. It's also important to note that the model produces ridership forecasts that are unconstrained with regard to train seating capacity and parking capacity.

As the model is incremental, it starts with a base number of riders per station pair that is then adjusted for two dimensions. The first dimension forecasts the growth based on the market size, and the second dimension forecasts the growth based on service characteristics. The key markets addressed in the forecasting model system are defined by geographical location (i.e., origin-destination station pair).

The first dimension addresses the growth in intercity person travel volumes due to socio-economic growth factors, including population, employment, and income. This is done both to account for base year to future year growth and to adjust for differences between the actual station pair and the proxy station pair (if necessary). The second dimension adjusts the rail ridership in each market, based on the following service characteristics:

- Line haul travel time
- Frequency of service
- Time of day of service

Total market-to-market frequencies are scaled based on arrival and departure times of each train serving the market. These scaling factors are based on the observed performance of trains in different departure/arrival time slots within rail corridors throughout the US. A train's utility and market share are determined by the combination of arrival and departure factors along with the time to the previous and subsequent trains, travel time, cost, and on-time performance. The model outputs include ridership, revenue, and vehicle miles traveled (VMT) diverted for each alternative.

4. Model Inputs

The intercity passenger travel market data for this study was assembled from a number of different sources. These sources included socio-economic data and travel-related service characteristics for the study markets. In the current study, socio-economic data was obtained from the Regional Planning Associations in the study area, including:

- Berkshire Regional Planning Commission (BRPC)
- Cape Cod Commission (CCC)
- Central Massachusetts Regional Planning Commission (CMRPC)
- Franklin Regional Council of Governments (FRCOG)
- Metropolitan Area Planning Council (MAP)
- Montachusett Regional Planning Commission (MRPC)
- Martha's Vineyard Commission (MVC)
- Merrimack Valley Planning Commission (MVPC)
- Northern Middlesex Council of Governments (NMCOG)
- Nantucket Planning and Economic Development Commission (NPEDC)
- Old Colony Planning Council (OCPC)
- Pioneer Valley Planning Commission (PVPC)
- Southeastern Regional Planning and Economic Development District (SRPEDD)

Travel-related service data was collected from publicly available sources, including ridership information and rail schedules from Amtrak.

The base model year is 2018 in order to account for the new CTrail Hartford Line service between Springfield and New Haven, which opened in June of 2018. Data obtained for different years was adjusted as discussed in the following sections.

4.1 Base Year Data

As described above, this methodology used an incremental model that pivots off existing base year data including ridership, revenue, and passenger-miles. All three of these types of data are at the annual station-to-station bi-directional level by route, including connections between routes. The routes used for this analysis are as follows:

- Amtrak:
 - NE Regional trains on the segment Boston to New York via New Haven
 - NE Regional and Amtrak shuttles operating on the Hartford Line from Springfield to New Haven
 - Lake Shore Limited
 - Vermonter
 - Downeaster (added for the Final Alternatives analysis)
- CTail Hartford Line from Springfield to New Haven
- MBTA Worcester Line

The baseline data were developed separately for each service operator, and the sources are listed in Table 1. As the ridership was available at the boardings and alightings level, not flows, an iterative proportional fitting (IPF) process was used to develop a flow table from the count data. In this way it is an estimated flow table but based on actual counts. While not a model input, base year revenue was used to calculate the forecasted revenue by multiplying station to station fares by ridership. The revenue used either the average fare (for connecting services) or a formula based on station to station average passenger yields (for Amtrak services). The passenger miles were calculated using station rail mileposts for all three service providers.

Table 1. Base Year Data Sources

Service Operator	Ridership Data Source	Revenue Data Source	Passenger Miles Data Source
Amtrak	Amtrak Station boardings and alightings FY18	Estimated revenue per passenger formula based on NNEIRI analysis	Estimated based on station mileposts
CTail	CTail station average daily boardings and alightings, 2018	Assumed average fare of \$6.01 based on examination of station to station fares	Estimated based on station mileposts
MBTA	MBTA weekday boardings and alightings by train, Spring/Fall 2018	Assumed average fare of \$7 based on examination of station to station fares	Estimated based on station mileposts

4.2 Proxy Station Pair Assignment

While not a traditional model input, the proxy station assignment is an important variable in determining the final ridership forecast in the incremental model. As described above, this model is an incremental model operating at the station pair level, meaning it pivots off the base ridership data described in Section 4.1. In cases where there is no existing service, or when major changes in available rail service are anticipated (e.g., going from one round trip daily to 20 round trips daily), it is necessary to assign a proxy station pair. This gives a baseline ridership number that the model can then adjust based on market factors (both future growth and adjusting for differences in the proxy stations) and service factors (how the proposed service differs from the proxy station service).

Particularly for this analysis, the East-West Corridor would see substantial increases in frequency over the existing one Lake Shore Limited train per day. To account for these differences, station pair proxies

that were similar in terms of market characteristics and existing service offered, were assigned as needed. These were based on the following criteria:

- Station pair distance. In travel demand modeling, trip production is frequently based on distance, using a gravity model formulation. In this case, we want to ensure the station pairs we are substituting are a similar distance apart to the new station pair, so they have a similar attraction. This factor is not explicitly accounted for in our proxy station factor adjustments, but it helps control for variances.
- Market size. The base ridership is directly factored based on the population and employment on both ends of the trip for the proxy pair versus the new pair. By choosing a pair with similar market sizes, we can minimize this adjustment. In most cases, the proxy market size does not have to be identical to the market being modeled, as the model is able to adjust the demographics up or down to account for size differences. In cases such as Boston, which is a very large market compared to others in the region with a strong employment base, special care must be taken to ensure the baseline ridership is adjusted appropriately.
- Service offered (travel time, frequency, time of day, etc). The base ridership is directly factored based on the service characteristics of the proxy pair versus the new pair. By choosing a pair with similar service types, we can minimize the impact of this adjustment.

The proxy market pair selection process for this analysis is described in more details for the Preliminary and Final Alternatives in Section 6.2 and Section 6.3.

4.3 Socio-Economic Data

The socio-demographic data in the model was updated with data obtained from local MPOs to ensure the most current forecast data for population, employment, and income was included in this study. Data sources included the following:

- Massachusetts town and RPA-level population and employment for years 2010, 2020, 2030, and 2040
- Connecticut and New York metro area population, employment, and income from NYMTC for years 2010, 2020, 2030, and 2040

Demographic forecasts are one of the key inputs to the model, in addition to the rail service operating plan. The model process requires that the demographic data be at the station level, which is at a smaller scale than the town level. To translate town-level demographic data to station-level data, the town-level forecasts were first split to the Census Division level, which is a much smaller geographic area. Using 2010 Census data, the ratios of Census Division population to town population were estimated. These ratios were used to split population and income. Similarly, employment was split using the ratios of employment at the Census Division level versus town level from 2010 Census Data. Once the demographic forecasts were split, a custom GIS application was employed to calculate the population and employment contained within buffers around the stations. Concentric buffers ranging from five to twenty miles around stations were used, and a weighted average population and employment of the buffers is the actual input into the ridership model. The weights are applied to all four buffers (five, ten, fifteen, and twenty miles), with the closer buffers being weighted higher to account for a higher likelihood that those residents/employees are more likely to use the station versus the further out buffers. This weighted average accounts for the fact that people closer to a station are more likely to use transit, as opposed to other modes, and the weighted average also accounts for access time to the station.

4.4 Service Data

There are currently several different types of rail service in the study area:

- Northeast Regional trains originating in Boston providing service to Springfield, Hartford and New York, continuing to Washington, D.C. with intermediate stops.

- Northeast Regional trains originating in Springfield providing service to Hartford, local Connecticut stops, and interlining with the main Northeast Regional route at New Haven.
- CTrail Hartford Line trains operating between Springfield and New Haven
- Lake Shore Ltd trains originating in Boston providing service to Springfield continuing to Chicago, IL
- Vermonter trains originating in St. Albans, VT providing service to Vermont stations, Springfield, Hartford and New York

Market data for rail travel was developed from the station boardings and alightings for Amtrak FY18¹ and CTDOT Hartford Line counts for September 2018². This provided the baseline ridership numbers for the calibration run of the model.

The service inputs for the model included a daily timetable for all trains in the corridor and was developed using published timetables from Amtrak and CTDOT. For future alternatives, these timetables were developed based on previous work in the corridor, and that process is described in more detail in Section 6.2. Table 2 below summarizes existing Amtrak service in the corridor, providing the number of daily round trips serving a selection of major stations. The daily round trips in the table provide a summary of the different types of services in the study area.

Table 2. Number of Existing Weekday Trains by Service (Round Trip)

Service	NE Regional	Lake Shore Ltd	Vermont	CTrail	Total
Boston-Springfield-Pittsfield	0	1	0	0	1
Springfield-Hartford-New Haven	8	0	1	8	17
St. Albans-Springfield	0	0	1	0	1

Source: Amtrak Lake Shore Timetable (effective 9/4/18), Amtrak Vermonter Timetable (effective 3/4/19), and CTrail Timetable for both NE Regional trains and CTrail (effective 11/12/18)

The final service characteristic that is needed to evaluate the rail alternatives is the average rail fares, which were computed by dividing the actual Amtrak revenue by ridership and applying it at the station-to-station level. This is not a direct input to the modeling, but fares are instead applied to the forecasted ridership to produce an estimate of the total revenue generated per alternative.

5. Model Calibration

In order to calibrate the intercity model, the base year input data were first reconciled into a common base year, and then the model was calibrated to match the existing count data. This section describes the process used to do these steps.

5.1 Base Year Reconciliation

In order to produce a base year calibration run, all of the data sources were reconciled into a common year, including both socio-economic data and ridership data. The latest available Amtrak ridership data was for 2018, which was the baseline year for data. The socio-economic data was available for 2010 and 2020, so it was interpolated to produce a consistent 2018 set of population, employment, and income. As

¹ <https://www.amtrak.com/state-fact-sheets>

² Provided by CTDOT

the CTDOT Hartford Line service started operation in 2018, the September 2018 counts were factored using the same factors from the socio-economic data to ensure they were consistent with the Amtrak ridership data.

For the service side, the 2018 service plans for CTrail Hartford Line service and the 2018 timetables for Amtrak were used.

5.2 Model Calibration

Once all the model input data was reconciled to the base year of 2018, the model was calibrated to match the base year boardings and alightings at the station-level and the route-level ridership totals. The calibration process involved running the model using the time, cost, and frequency characteristics of the existing Amtrak and CTDOT service, with current population, employment, and income data. The model calibration parameters were then adjusted until the forecasted output corresponded with the actual ridership data. Table 3 below shows the actual versus modeled route-level totals for the calibration run.

Table 3. Calibration Run Route-Level Annual Ridership

Route	Base Year Ridership	Forecast Ridership	Absolute Difference	Percent Difference
Lake Shore Limited	4,200	3,900	-300	-7.1%
Hartford Line (CTrail/Amtrak)	197,900	197,700	-200	-0.1%
NE Regional	626,200	607,000	-19,200	-3.1%
Vermont	2,300	2,600	300	13.0%
MBTA Worcester Line	2,799,500	2,819,600	20,100	0.7%

Source: AECOM

6. Alternatives Analysis

For analysis purposes, all alternatives tested had a forecast year of 2040. This section describes the process used to develop the No-Build alternative, the Preliminary Alternatives, and the refinements for the Final Alternatives.

6.1 No Build Alternative

The No-Build Alternative forecast was developed using the base year service as described in Section 4.4, using the 2040 socio-economic data as described in Section 4.3. This forecast provided a baseline for evaluating the Preliminary and Final Alternatives against the natural socio-economic growth in the corridor.

6.2 Preliminary Alternatives

This analysis examined six preliminary alternatives for rail service in the corridor, ranging from extending current MBTA Worcester trains with bus transfers to Pittsfield up to high-speed service in the entire Boston to Pittsfield corridor, with the following general characteristics:

- Alternative 1: Extend current MBTA service from Worcester to Springfield along with some additional rail connections between Worcester and Springfield, bus service from Springfield to Pittsfield.
- Alternatives 2: New East-West service between Boston and Springfield, bus service from Springfield to Pittsfield.

- Alternative 3: New East-West service between Boston and Pittsfield, speed increases versus Alternative 2.
- Alternative 4: New East-West service between Boston and Pittsfield, small speed and frequency increases versus Alternative 3.
- Alternative 5: New East-West service between Boston and Springfield, bus service from Springfield to Pittsfield. Speed increases in BOS-SPG segment, frequency increases versus Alternative 4.
- Alternative 6: New high-speed East-West service between Boston and Pittsfield, large speed and frequency increases over all other alternatives.

In addition to the East-West service, the alternatives allow for transfers at Springfield onto the Hartford Line. These six Preliminary Alternatives were specified as a daily timetable, including station stops and detailed schedules in both directions, for input into the model. Example frequency and travel time characteristics of each Preliminary Alternative are shown in Table 4 and Table 5 below.

Table 4. Preliminary Alternatives Service Plan Summary – Frequency (Round Trips)

Segment	No Build	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
BOS-SPG	1 direct	1 direct	7 direct	8 direct	10 direct	10 direct	18 direct
Lansdowne/Boston Landing - SPG (MBTA transfers)	0	4 conn.	6 conn.	7 conn.	9 conn.	9 conn.	17 conn.
SPG-PIT	1 direct	1 direct, 4 bus conn.	1 direct, 6 bus conn.	5 direct	5 direct	1 rail, 9 buses	17 direct
BOS-NHV (connections to HL are not coordinated)	1 conn.	5 conn.	6 conn.	6 conn.	6 conn.	8 conn.	10 conn.

Table 5. Preliminary Alternatives Service Plan Summary – Average Travel Time (Minutes)

Segment	No Build	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
BOS-SPG	148	162	134	118	115	100	81
BOS-PIT	232	240	219	196	191	185	141

For the Preliminary Alternatives analysis, the East-West service was assumed to be similar to the Hartford Line service, and example proxy station pairs chosen include Springfield-Hartford for East-West station pairs with larger populations and Springfield-Wallingford for station pairs with smaller populations. The 2018 base annual ridership for Springfield-Hartford was approximately 75,000 and the 2018 base ridership for Springfield-Wallingford was approximately 5,500.

6.3 Final Alternatives

After the Preliminary Alternatives were evaluated, the consultant team made revisions to the modeling assumptions based on feedback from the Study Advisory Committee and the public prior to estimating ridership for the three final action alternatives. Major comments received included the following:

- 20-mile radius around stations for potential riders is too small.
- Initial ridership forecasts are too low given comparable corridors in the region such as the Downeaster.
- Ridership forecasts should include induced demand.

The project team examined the impact of adjusting the station buffers used to develop the demographic inputs to the model. The straight-line 20-mile buffers enabled a reasonable coverage of the state in most cases, as seen in Figure 2 on the next page. Expanding the buffers beyond that to allow for longer rural station access would create problematic station assignment patterns at the edge of the buffers and

overlap with other more logical transit options. The one case that it was reasonable to adjust the buffers was the Springfield station. The demographic buffers are typically split between stations to ensure that the demographics were not being double counted, leading to an overestimation of ridership. In the case of Springfield, this was forcing potential East-West riders north and south of Springfield to first get on either the Vermonter or Hartford Line and transfer onto the East-West line, with a less attractive transfer time and penalty associated with this movement. A more realistic action would instead have the rider drive slightly longer to the Springfield station and access the East-West line directly. By releasing this constraint at Springfield, the model was better able to capture the areas surrounding Springfield, particularly the 5 Colleges area.

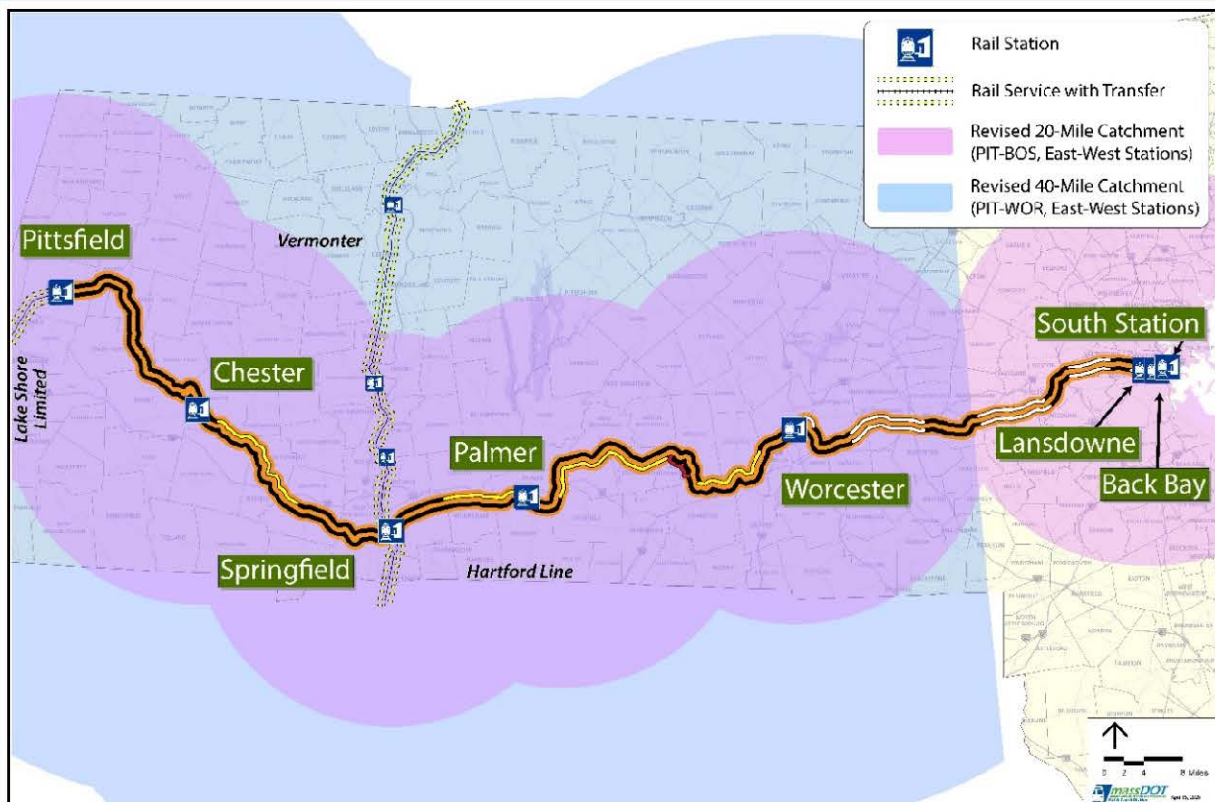


Figure 2. Demographic Buffers

The major adjustment to the modeling methodology was to closely examine the proxy station assignment process to better represent some of the unmodeled attributes of the rail line, and to account for the large pull of the Boston market, which is of a different scale than on the Hartford Line. During this process, the project team developed two modeling assumptions which were used to create a new ridership range for the final three alternatives. The first proxy case utilized the Hartford Line baseline ridership but refined the station pairs chosen and adjusted these to account for the larger pull of Boston. The second proxy case switched to using the Downeaster service as the baseline, which is outside of the East-West study area but represented a mature rail service in the region, which was grounded with Boston as a terminus, similar to the East-West line.

Other suggested proxy services and reasons why they were not used in the final analysis included the following:

- **Boston to Providence:** This is a shorter corridor, which inherently changes trip patterns (attractions are highly tied to trip distance), and is a commuter line, with very different service characteristics, fares, and trip purpose than anticipated on the East-West line. The Amtrak service in the corridor could be considered comparable but would be similar to the Downeaster service that was used as one of the proxies.

- Chicago's South Bend: It is assumed the mid-west has very different attitudes towards rail versus the Northeast. Like the previous corridor, this corridor is shorter than the East-West. Chicago's metro population is approximately double that of Boston, which could distort the ridership.
- Stockton, San Francisco: This is a commuter line, and typically has very different underlying travel patterns. The Bay area typically has much longer commute trip lengths than anywhere in the country, with the possible exception of NYC. There are too many differences in the unmodeled factors to be a reasonable base.
- Beacon, New York to New York City: New York City is not a comparable market to anywhere else in the United States. The demographic differences between Boston and New York are just too great for any model to adjust in a reasonable manner.

Table 6 summarizes the modeled and unmodeled attributes of the Hartford Line and Downeaster services and how they compare to the East-West service. For the modeled characteristics, an approximate fit is reasonable to utilize because the model adjusts for these components. Unmodeled attributes should be aligned to match as closely as possible.

Table 6. Proxy Service Comparisons

Attribute Type	Attribute Name	Hartford Line Proxy	Downeaster Proxy
Modeled	Trip Length	• Shorter trips	• Good match
Modeled	Population and Employment	• Matches medium-sized pairs • Missing small and large pairs	• Good match
Modeled	Rail Service	• Frequency matches higher alternatives • Speeds match medium alternatives	• Good match to alternatives 3/4 • Scales well to alternatives 1/2/5/6
Unmodeled	Total Market Size and Competition	• Doesn't include a clear representation of Boston (large employment draw) • Good match – includes multiple medium/large metro areas for competition (NYC, HFD, NHV)	• Directly includes Boston (large employment draw) • Larger total market – includes only a single large metro area (no competition)
Unmodeled	Traveler Type and Purpose Split (mostly unknown for East-West)	• Less than half commuters	• Commuter-focused • Includes student populations
Unmodeled	Fares	• Approximately \$0.21/mile CTrail, \$0.42/mile Amtrak	• Approximately \$0.20/mile

The final refinement to the ridership methodology included examining induced demand in the forecast. The model does not directly include induced demand, which is a measure of new total travel on top of baseline demand. This does not include new trips due to demographic shifts, but rather travelers who previously would not have made a trip but could do so because of the introduction of a new mode or a greatly improved mode that improves the transportation network as a whole and not just rail. For example, rail travelers see faster travel times and more frequencies in the higher alternatives, while auto travelers who shift to high-speed rail because the rail is faster reduce the number of automobiles on the freeways, and therefore also reduces congestion for auto travel. For the case of the Downeaster proxy, the baseline ridership already includes what could be considered induced demand, as it is a mature service and has captured those new trips already. The Hartford Line is a relatively new service and has seen tremendous growth over the first year of its service, exceeding forecasts and continuing to grow. Therefore, it would be reasonable to assume some level of induced demand above the ridership estimated off of the baseline proxy ridership. The project team examined other rail ridership forecasts in

the US and globally and concluded an increase of five percent to fifteen percent in ridership due to induced demand would be reasonable and considered the high end of the US rail forecasting practice. This percentage increase was applied at the station pair level based on area type of both stations:

- Rural-Rural – 5% increase
- Rural-Urban – 10% increase
- Urban-Urban – 15% increase

The urban stations include Boston, Worcester, and Springfield, and the rural stations include Pittsfield, Lee, Chester, Blandford, and Palmer.

Table 7 contains a summary of the model refinements made for the Final Alternative forecasts.

Table 7. Ridership Modeling Refinements Summary

Modeling Factor	Hartford Line Proxy	Downeaster Proxy
Boston Representation	Factored to better reflect the large pull of Boston employment	Included directly in Downeaster baseline
Market Competition	Adjusted for Hartford Line having more medium or large competitive markets (i.e., New York, Hartford, New Haven)	Adjusted for Downeaster not having any other medium or large competitive markets (only Boston)
Trip Distance	Switched to longer-distance station pairs to reflect a better mix of intercity and commuter travel	Trip distances match well with Downeaster station pairs
Market Types/Proxy Pairs	Refined station pairs to better match on market types (rural, urban, demographics, etc.)	Refined station pairs to better match on market types (rural, urban, demographics, etc.)
Demographic Buffers	Released constraint on Springfield buffer to reduce required rail transfers	Released constraint on Springfield buffer to reduce required rail transfers
Induced Demand	Added into final forecast	Assumed included in Downeaster baseline proxy ridership

After presenting the results of the model refinements for Preliminary Alternative 3 to the Advisory Committee, the three Final Alternatives were selected:

- Alternative 3: New East-West service between Boston and Pittsfield, with same travel time and frequency characteristics as the initial Alternative 3.
- Alternative 4: New East-West service between Boston and Pittsfield, with same travel time and frequency characteristics as the initial Alternative 4.
- Hybrid Alternative 4/5: New East-West service between Boston and Pittsfield, combining the speed increases of the initial Alternative 5 between Boston and Springfield with the rail service between Springfield and Pittsfield from the initial Alternative 4.

In addition to the East-West service, the alternatives allow for transfers at Springfield onto the Hartford Line. These three Final Alternatives were specified as a daily timetable, including station stops and detailed schedules in both directions, for input into the model. Example frequency and travel time characteristics of each Final Alternative are shown in Table 8 and Table 9 on the next page.

Table 8. Final Alternatives Service Plan Summary – Frequency (Round Trips)

Segment	No-Build	Alt 3	Alt 4	Alt 4/5
BOS-SPG	1 direct	8 direct	10 direct	10 direct
Lansdowne/Boston Landing - SPG (MBTA transfers)	0	7 conn.	9 conn.	9 conn.
SPG-PIT	1 direct	5 direct	5 direct	5 direct
BOS-NHV (connections to HL are not coordinated)	1 conn.	6 conn.	6 conn.	6 conn.

Table 9. Final Alternatives Service Plan Summary – Average Travel Time (Minutes)

Segment	No-Build	Alt 3	Alt 4	Alt 4/5
BOS-SPG	148	118	115	97
BOS-PIT	232	196	191	170

6.4 Ridership Results

The 2040 annual ridership forecast results for the Preliminary Alternatives at the segment- and individual station-level are shown in Table 10 and Table 11, respectively, beginning on the following page. For the Preliminary Alternatives, ridership in Alternative 1 is moderately higher compared to 2040 No Build, and ridership in Alternatives 2 – 6 is substantially higher than the No-Build due to increased service and lower average travel times (between Boston to Springfield and Boston to Pittsfield) in each of these alternatives. Alternative 6 is forecasted to have the most annual ridership, nearly double the ridership of Alternative 4, which has the second-most forecasted ridership.

For Alternatives 2 – 6, roughly two-thirds of overall ridership occurs within the Boston-Springfield market and only about 2 percent of overall ridership occurs within the Springfield to Pittsfield market. Ridership between the Boston-to-Palmer and Chester-to-Pittsfield markets is relatively low to moderate in Alternatives 1 – 5 and substantially higher in Alternative 6, which includes the most direct connections between Boston and Springfield and Springfield to Pittsfield.

The number of transfers from East-West service to the Hartford Line is small in Alternative 1 and larger for Alternatives 2 – 6. Alternative 6 has the most forecasted East-West to Hartford Line transfers, with about 50 percent more transfers than Alternative 5, which has the second-most forecasted transfers. The number of transfers between MBTA service and East-West service at Worcester is low for Alternatives 1 and 2, moderate for Alternatives 3 – 5, and highest for Alternative 6. For Alternatives 2 – 6, roughly 80 percent of boardings at Worcester and at Springfield are made by passengers who directly access these stations (via drive or walk access); the other roughly 20 percent of boardings are made by passengers who transfer from MBTA or Hartford Line services.

Alternatives 3 and 4 offer similar service, except Alternative 4 has two more direct connections between Boston and Springfield. Total annual ridership in Alternative 4 is about 62 percent higher than in Alternative 3, with about 80 percent of the increase in ridership occurring within the Boston-Springfield market. Alternatives 5 and 6 provide service to the same set of stations, but Alternative 6 provides far more and faster service relative to Alternative 5. As a result, total annual ridership in Alternative 6 is approximately double the ridership in Alternative 5, with much of the increase in ridership occurring in the Boston-Springfield market (59 percent) and between the Boston-Palmer and Chester-Pittsfield segments (33 percent).

Table 10. 2040 Annual Ridership Forecast Results by Segment – Preliminary Alternatives (One-Way Bi-Directional Trips)

Alternative	No-B	No-B	1	1	2	2	3	3	4	4	5	5	6	6
<u>Ridership Segment (*) /</u> <u>Boarding Measure</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>
Within Boston-Springfield Segment	2,900	10	5,200	17	34,100	113	47,400	157	83,500	276	80,200	266	164,600	545
Within Springfield-Pittsfield Segment	400	1	600	2	900	3	1,800	6	2,800	9	2,300	8	5,300	18
Between BOS-PLM and CHS-PIT Segments	1,300	4	4,000	13	5,000	17	12,900	43	20,200	67	19,500	65	57,800	191
Between BOS-PLM and WNL-NHV Segments* (transfer trips from East-West to Hartford Line)	400	1	1,300	4	7,900	26	10,200	34	10,600	35	13,000	43	19,900	66
Total Ridership	4,950	16	11,150	37	48,000	159	72,250	239	117,100	388	115,050	381	247,700	820

*Segment-level ridership may not exactly match the total annual ridership due to rounding.

Table 11. 2040 Annual Ridership Forecast Results by Station – Preliminary Alternatives (One-Way Bi-Directional Trips)

Alternative	No-B	No-B	1	1	2	2	3	3	4	4	5	5	6	6
<u>Station / Boarding Measure</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>
Boston (South Station), MA (E-W service)	1,550	5	850	3	8,400	28	11,800	39	20,400	68	21,600	72	46,050	152
Boston (Back Bay), MA (E-W service)	450	1	350	1	4,100	14	5,700	19	9,850	33	10,500	35	22,150	73
Lansdowne, MA (E-W service)	0	0	0	0	700	2	2,800	9	5,400	18	4,900	16	9,650	32
Framingham, MA (LSL service)	150	0	100	0	750	2	700	2	700	2	650	2	950	3
Worcester, MA (direct access, E-W service)	300	1	1,900	6	9,700	32	13,000	43	22,650	75	23,950	79	49,850	165
Worcester, MA (MBTA transfers)	0	0	1,950	10	2,850	9	5,150	17	5,800	19	6,700	22	12,650	42
Palmer, MA (E-W service)	0	0	450	1	2,950	10	3,900	13	6,700	22	0	0	11,150	37
Springfield, MA (direct access, E-W service)	1,450	5	2,300	8	11,650	39	16,750	55	28,750	95	29,300	97	53,650	178
Springfield, MA (HL transfers)	200	1	650	2	3,950	13	5,100	17	5,300	18	6,500	22	9,950	33
Lee, MA (E-W service)	0	0	200	1	400	1	0	0	0	0	1,950	6	5,200	17
Blandford, MA (E-W service)	0	0	400	1	400	1	0	0	0	0	1,850	6	4,950	16
Chester, MA (E-W service)	0	0	0	0	0	0	950	3	1,600	5	0	0	0	0
Pittsfield, MA (E-W service)	850	3	2,000	7	2,150	7	6,400	21	9,950	33	7,150	24	21,500	71
Total Ridership	4,950	16	11,150	37	48,000	159	72,250	239	117,100	388	115,050	381	247,700	820

Forecasted ridership results for the Final Alternatives at the segment- and individual station-level are shown in Table 12 and Table 13 beginning on the following page. The Final Alternatives include Preliminary Alternatives 3 and 4 and a hybrid alternative that blends Preliminary Alternatives 4 and 5. The forecasts in Table 12 and Table 13 include model results for two versions of each Final Alternative: “Hartford Line Base Enhanced” (abbreviated as “HL” in the tables) and “Downeaster Base” (i.e., “DE” in the tables), which are described in Section 6.3.

Total annual forecasted ridership for the Final Alternatives is high relative to ridership in 2040 No-Build. Generally, the Alternative 4/5 Hybrid has higher forecasted overall ridership, segment-level ridership, and station-level boardings compared to Alternative 4, which generally has higher ridership and boardings compared to Alternative 3 (when comparing the same version across alternatives – either Hartford Line Base Enhanced or Downeaster Base). For each alternative, the Downeaster Base version has higher forecasted ridership and boardings compared to the Hartford Line Base Enhanced version, with the exception of boardings at Framingham.

For the Hartford Line Base Enhanced version in each Final Alternative, approximately 85 percent of ridership is forecasted to occur within the Boston-Springfield market, followed by approximately 7 percent of ridership between Boston-Palmer and Chester-Pittsfield segments and 6 percent between Boston-Palmer and the Hartford Line. In the Downeaster Base version of the Final Alternatives, between 70 – 74 percent of ridership occurs in the Boston-Springfield market, followed by 15 percent of ridership between the Boston-Palmer and Chester-Pittsfield segments and about 10 percent between Boston-Palmer and the Hartford Line.

The number of transfers between the Hartford Line and East-West service stays approximately the same across alternatives for a given Base version (i.e., Downeaster Base or Hartford Line Enhanced Base), and the Downeaster Base version has about twice as many Hartford Line to East-West transfers compared to the Hartford Line Base Enhanced version in each alternative. The number of transfers at Worcester between MBTA service and East-West service does not vary much across alternatives for a given Base version, and the Downeaster Base version has about 30 – 50 percent more of these transfers compared to the Hartford Line Base Enhanced version, depending on the alternative.

For each Final Alternative, about 80 percent of passengers that board at Worcester directly access the station (via drive or walk access); the remaining 20 percent or so of boardings are made by passengers who transfer from MBTA service. Similarly, about 90 percent of passengers that board at Springfield directly access the station (via drive or walk access), and the remaining 10 percent or so of passengers transfer from Hartford Line service.

Table 12. 2040 Annual Ridership Forecast Results by Segment – Final Alternatives (One-Way Bi-Directional Trips)

Alternative	No-B	No-B	3	3	3	3	4	4	4	4	4/5	4/5	4/5	4/5
Proxy Service Scenario (+)	N/A	N/A	HL	HL	DE	DE	HL	HL	DE	DE	HL	HL	DE	DE
Ridership Segment (*) / Boarding Measure	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily
Within Boston-Springfield Segment	2,900	10	231,900	768	251,500	833	297,300	984	302,900	1,003	335,300	1,110	346,200	1,146
Within Springfield-Pittsfield Segment	400	1	3,900	13	7,300	24	4,500	15	7,700	25	4,500	15	7,700	25
Between BOS-PLM and CHS-PIT Segments	1,300	4	21,500	71	55,300	183	26,100	86	63,600	211	28,400	94	68,100	225
Between BOS-PLM and WNL-NHV Segments* (transfer trips from East-West to Hartford Line)	400	1	20,500	68	44,400	147	21,000	70	42,300	140	22,500	75	47,200	156
Total Ridership	4,950	16	278,300	922	358,250	1,186	349,350	1,157	416,050	1,378	391,200	1,295	469,000	1,553

+ - "HL" refers to the Enhanced" Hartford Line proxy service forecast scenario while "DE" refer to the Downeaster scenario.

*Segment-level ridership may not exactly match the total annual ridership due to rounding.

Table 13. 2040 Annual Ridership Forecast Results by Station – Final Alternatives (One-Way Bi-Directional Trips)

Alternative	No-B	No-B	3	3	3	3	4	4	4	4	4/5	4/5	4/5	4/5
Proxy Service Scenario (+)	N/A	N/A	HL	HL	DE	DE	HL	HL	DE	DE	HL	HL	DE	DE
Station / Boarding Measure	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual	Daily
Boston (South Station), MA (E-W service)	1,550	5	56,750	188	62,650	208	72,250	239	74,650	247	81,650	271	85,250	282
Boston (Back Bay), MA (E-W service)	450	1	45,450	151	54,700	181	58,100	192	65,150	216	65,650	218	74,150	245
Lansdowne, MA (E-W service)	0	0	15,150	50	18,200	60	19,350	64	21,700	72	21,900	73	24,700	82
Framingham, MA (LSL service)	150	0	1,550	5	650	2	1,550	5	450	1	1,750	6	800	3
Worcester, MA (direct access, E-W service)	300	1	19,300	64	35,250	117	23,250	77	39,500	131	25,500	84	43,250	143
Worcester, MA (MBTA transfers)	0	0	6,400	21	9,450	31	7,250	24	9,550	32	8,100	27	11,350	38
Palmer, MA (E-W service)	0	0	4,950	16	6,550	22	6,050	20	7,100	24	6,500	22	8,000	26
Springfield, MA (direct access, E-W service)	1,450	5	105,700	350	116,750	387	135,700	449	140,600	466	152,400	505	159,500	528
Springfield, MA (HL transfers)	200	1	10,250	34	22,200	74	10,500	35	21,150	70	11,250	37	23,600	78
Lee, MA (E-W service)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blandford, MA (E-W service)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chester, MA (E-W service)	0	0	1,400	5	4,200	14	1,700	6	4,700	16	1,850	6	5,000	17
Pittsfield, MA (E-W service)	850	3	11,400	38	27,650	92	13,650	45	31,500	104	14,650	49	33,400	111
Total Ridership	4,950	16	278,300	922	358,250	1,186	349,350	1,157	416,050	1,378	391,200	1,295	469,000	1,553

+ - "HL" refers to the Enhanced" Hartford Line proxy service forecast scenario while "DE" refer to the Downeaster scenario.

*Segment-level ridership may not exactly match the total annual ridership due to rounding.

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
1/31/2019	Rob Kearns	University of Massachusetts Amherst	rkearns@umass.edu	[see PDF] Attached is a resolution by the University of Massachusetts Student Governmet Association in support of East West Passenger Rail Service	Email to Scott Hamwey
3/12/2019	Andrew Riedl		ariedl82@gmail.com	I think it is fantastic that this crucial rail service is finally being studied and as a resident of Eastern MA, I would love to have the option to visit my family in the springfield area by rail. There are people in Eastern MA who are very much in favor of this project and want to be involved. I am very excited to watch it progress.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Betsy Johnson		betsy@bgjohnson.com	Alternatives need to consider implementation timeline as well as cost. Sooner the better.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Robert Kearns	Umass SGA	rkearns@umass.edu	Hello, I am Robert Kearns, a student of Umass Amherst and a member of student government association. I would like east-west rail to travel to and from work, home, classes, volunteer and internships in Boston Area. I provide survey of Umass students and an SGA resolution in support of East-West rail. Having Bus connection to UMass/5 colleges to springfield and/or Palmer would be great. [see PDF]	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Andy Anderson	Amherst College	aanderson@amherst.edu	High Speed SPG-BOS is my primary interest. I'm an academic and this would facilitate interactions between the academic communities in the pioneer valley and boston. (Yale is nice, but I like harvard better :)) Especially once additional trains become available SPG-NOHO in the near future. Limited stops, of course. I do also think it is worthwhile putting in local service along the existing ROW, especially since that can be provided much sooner than high-speed.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Eric Bascom	East Longmeadow, MA	ericboscom@gmail.com	1. It there a way for the cost report to be released in Jan 2020? As a tax payer im concerned about tax in/creases and costs for investments. 2. Will pittsfield please be a taken out of discussion? It should be part of a northern route study. 3. Why can I travel from fitchberg to boston and not greenfield to boston?	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Eric Bascom	East Longmeadow, MA	ericboscom@gmail.com	1. How is this train high speed rail if it goes through hills and mountains to boston? 2. Can we get all the costs by jan 2020 to allow politicians to debate it??	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Byran Farr	Historic Rt.2 108 Skyline Tr. Chester, MA	bt Farr@gmail.com	Consider too those already living in communities inbetween rail stops - like Chester, MA. Husband commutes via car to pittsfield from chester	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Scarlet Lamottle	Palmer Rail Streering Committee - college grad	scarletlamottle@gmail.com	I am a resident of Palmer and it's dissappointing that Western Mass is not a priority. There was mentions of "investments... Investments." we need to INVEST in the entire commonwealth of Massachusetts. You've spent 24.3 Billion on the Big Dig. That benefitted eastern mass which is a small part of mass. Spend money on an investment that is a billion more times beneficial! I believe that a stop in Palmer, MA would be extremely beneficial to the economy and stopping there would bring plenty of people. Palmer was once known as the spot of the seven railroads and many people in Palmer are pushing for a stop to not only improve Palmer economically, but would also put the surrounding towns on the map. Lets spend money on a stop that would be beneficial to all western MA	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Heidi C. Bara	Citizens for Palmer Rail Stop	Bara.Heidi@yahoo.com	I am for highspeed rail with a stop in Palmer. As a resident of Palmer it would improve all surrounding towns in the region, 21 towns, about 195,000 people it would affect. Bringing more jobs, giving these residents opportunities to work in Boston or Springfield with an easier commute. The area would benefit greatly from this economic development. providing more jobs and affordable housing.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	David O'leary	Sierra Club - MA - Transportation Committee	Dave.Oleary@mdsierra.org	The Sierra Club Massachusetts Chapter supports expanded east-west rail service. As noted during the presentation, we understand that there are various challenges and we look forward to updates and engaging actively in the decision making process. More detailed and formal comments will be submitted separetly. [see PDF]	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Margaret Montoni		Mmantoni@loomiscommunities.org	1) we have the opportunity to completely change the face of western mass. Young people leave here everyday for "opportunities", things to do etc. The jobs follow the people, the people follow the jobs. So we are in a crazy circle in our state. Let's all work together to make massachusetts (and New England) "the palce to be". 2) the only true change will come from high speed-people won't commute every day w/ 2+ hours each way. 3) I hope I am around to see this happen. It will be Amazing - Let's set massachusetts apart from the rest of the country.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Kerry Jackson	West Springfield, MA	Kerryjackson@rocketmail.com	I know everyone would love superfast high spped rail. But if the "slow" version gets us to south station boston in 1:50 that is fantastic. It was 1hr from commuter rail in framingham. Get the rail going ASAP if it means "slow" I'd be very happy getting emails and work done on the train commute. Missing demographic : the thousands of western MA people who already commute into boston.	Springfield Public Meeting 3/12/19 Comment Form

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
3/12/2019	Tayna Neslusan	Sturbridge, MA	tanya.neslusan@gmail.com	tThe most important thing is to connect the towns in western and central massachusetts to boston. We need to prioritize accessibility over speed and probide public transit options. The lack of access to our state capital impedes not only our economic development but our ability to engage politically.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Barbara Huntoon	Chester, MA	bjphuntoon@msn.com	Thank you for the study - looking forward to the study continuing and making E-W rail a reality. Western MA needs the economic growth boston needs housing relief, I90 traffic - particularly westfield to boston needs relief. The rural areas of western mass are ready and desperate for growth. please consider a rail that benefits not only high speed commuters, but the rural areas of the state. and please consider chester as a stop along the rail. it could be truly a win - win for the entire state.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Jeremy Fedors		jmfedors@live.com	East-West passenger rail would be useful to me for trips from worcester to springfield, since I travel south from there on amtrak on occasion. If some trains were closely in sync with amtrak arrivals, it would be an improvement over taking the bus to springfield. I am also thinking that the seperate ROW high-speed rail would be especially good, as the spped would convince more drivers to ditch the car. at least if this combined with improvements to local transit systems. maybe some of the smaller towns could use buses in sync with the trains, in order to travel to the express/local trains stations. P.S. please don't give in to anyone trying to water down plans for the sake of cutting budgets, if it severely limits speeds. people want to ride fast and on-time trains.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019				It would be of great benefit to add real substance to these presentations. The (illegible) approach to presenting material through content free sliders wastes everyone's time.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Moira Murphy	Resident + Coldwell banker realtor	moira.murphy@verizon.net	Consideration to innovative technology have sessions w/ Elon Musk on what his thoughts would be to get this SMALL state connected. We need to think outside the box and get MIT students + professors to get on board with creativity. The maglev or variations to it should be considered.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Joshua Brown		jbrown1082001@yahoo.com	East West rail service can also benefit sports fans whether if its college or professional.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	John Garrett	284 river road, S. Deerfield, Ma	johnjamesgarrett@gmail.com	Dear Gov. Baker, I would encourage you to forget about peter pan bus if you want your governorship remembered. In all seriousness it is vital to have a real effort to connect our commonwealth.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Richard D. Conley	P.O. Box #3 Brimfield Ma, 01010	search4richard@aol.com	I think that we need to consider HUB stations for example one in sturbridge at the intersection of Routes 84/20/90 would be perfect for train and bus dispatch with plenty of room for parking as well as servicing the heart of the region between worcester and springfield.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019	Elle Vandermark			None of your potential riders commute for work from Umass > Boston. You are foaling a significant demographic.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019				Please don't waste time and money on analyzing a MAG-LEV alternative. Include in the analysis a potential connection to Logan Airport because I could see people from western Mass wanting to access the lower airfare out of Boston for domestic and international travel.	Springfield Public Meeting 3/12/19 Comment Form
3/12/2019				I believe that a stop in Palmer MA would be extremely benefivial to the economy and stopping there would bring plenty of people. Palmer was once known as the spot of the seven railroads and many people in Palmer are pushing for a stop to not only improve Palmer economically but would also put the surrounding towns on the map. Let's spend money on a stop that would be beneficial to all Western MA.	Springfield Public Meeting 3/12/19 Comment Form

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
3/12/2019	Stan Rosenberg			Western Massachusetts is very engaged in the East-West Passenger Rail Study, and requested that MassDOT provide more opportunities for a “public hearing” so everyone can express their thoughts. He believes public hearings are a better outlet for working together than an open house style public meeting. Mr. Rosenberg then explained he is excited and appreciative that the project is moving into this new phase, but that a similar study (Northern New England Intercity Rail Initiative) has already been completed and cost the state a large amount of money. He emphasized again that Western Massachusetts is one community, and that its citizens want rail in all parts of the four counties. He said he knows the study is focused on the existing CSX route and a potential I-90 route but urged MassDOT to immediately start a study on the “Northern Tier” [i.e. the east – west Pan Am Railways corridor along the northern portion of Massachusetts], affecting Franklin County, Hampshire County and North Adams. He explained that there is an abundance of housing in Western Massachusetts which is beneficial for Eastern Massachusetts workers with reliable transportation. Mr. Rosenberg ended his comment by explaining that if rail is operating on both the northern and southern routes, all parts of Western Massachusetts can be connected to Boston, helping to repopulate Western Massachusetts and create statewide opportunities for economic growth.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Barbara Huntoon	Chair of Chester Board of Selectmen		said she took the bus from Chester to Pittsfield and then the train to Springfield. Ms. Huntoon explained she is from the forgotten areas between Springfield and Pittsfield, which need proper development. She explained that a railroad stop in Chester would benefit all local hill towns, and Massachusetts residents don't need to spend \$800,000 on a Brookline home when they could spend \$400,000 on a home in Chester.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Kerry Jackson			she is a Boston transplant from West Roxbury who moved to Springfield 15 years ago since she knew Springfield was a more affordable place to live. She explained that she knows there are thousands of Boston residents who can't afford to buy a house, and that if there were reliable transportation options people would come. Ms. Jackson ended by asking MassDOT if they have done a study to see how many people would move out if rail service was brought to Western Massachusetts	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Andrew Jennings			he would love better transportation in Western Massachusetts for recreation and tourism. He asked if there will there be a non-rail option (like buses) analyzed and brought to the end of the process, because the study geography gives MassDOT only one party to deal with – CSX. He stated that MassDOT needs a non-rail option to use as a negotiating tactic with CSX.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Ben Hood			emphasized that MassDOT can't forget about the places in between the big cities, they need to be included. He said it is beautiful up the valley, and people want to come out to hike the valleys and see the beautiful places. He explained that he is a little worried about the alternatives presented and believes they might leave out towns like Chester and Palmer for the second time in history. He said MassDOT needs to empower areas that have been treated unfairly and create a fully developed network of transit.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Richard Holzman	Pioneer Valley Planning Commissioner from Chester		he wanted to reiterate what other speakers have already said. He explained that MassDOT needs to look at connecting towns and human beings together, since quality of life is precious. He said MassDOT should not look at what the potential market demand is, but instead help develop that demand. He said maybe the numbers aren't there now, but MassDOT can help make that demand happen. If the agency invests in both the Northern and Southern Tier, the regions will see a major transformation in the economy. He added that MassDOT should ensure a new rail service connects to existing rail lines, and if I-90 is selected as a corridor for high-speed service, MassDOT needs to figure out how to make local downtown connections through a connecting network of rail services.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	no name provided			said he was concerned with the inclusion of a Maglev train on the list of alternatives, explaining it suggests a lack of seriousness in the study	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	Joshua Brown			he took the Commuter Rail and Greyhound to this meeting. He explained that the East-West rail service would benefit Boston sports fans going to Yawkey, North Station, Fenway, TD Garden, and Foxboro. He also explained that it would provide a link to Connecticut Rail and get Connecticut sports fans into Boston. He emphasized the sentiment that the whole region and its economy would benefit from the East-West Rail.	Springfield Public Meeting 3/12/19 Verbal Comment
3/12/2019	David Pierce			started by clarifying that there is only one Maglev that runs from Shanghai to the Airport. He explained that Chester is pushing for rail service because it already has an established station and parking. He said there are 11 hill towns that could easily access Chester's rail station, and the museum at the Chester Station would create tourist revenue.	Springfield Public Meeting 3/12/19 Verbal Comment

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-13-19_1	nancy rodriguez		nancer1@comcast.net	Saw news of study on high speed train Boston-Pittsfield . . HIGH SPEED - 175 mph , WHY ??????? There is a definite need for a train , but 175 mph through bucolic Massachusetts?? . What happens when trains are using old tracks or poorly maintained tracks and are approaching curves, bridges, tunnels at high rates of speed ? (see Amtrak accident records) PLEASE ----- a train YES , high speed NO !!!	MassDOT Contact Us Form
03-13-19_2	Robert Kearns		robsterkmc@gmail.com	Thank you for the informative meeting in Springfield. It was good talking to people on the project team about East West Rail. Is there any possibility that the next public meeting in Western Massachusetts could have a full town hall hearing style meeting? I have also been to a meeting by EEAA which had group focus groups that then would present to the full group and I thought that that style had its benefits as well. Having a combination of styles of meetings at the different meetings would be helpful for public, some people are more comfortable engaging in different ways. I thought I learned new things through hearing what some members of the public, like the folks from Chester and their perspective. It would also be great if there could be meetings in other parts of Western Mass so more people could attend. I carpooled with a friend who took the commuter rail to the greyhound. For example some meeting in the Environmental Justice community of Holyoke, City of Pittsfield, Town of Palmer, Town of Chester, Cities of Northampton and Amherst come to mind.	Email to Jen Slesinger

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-14-19_1	Bob Daley		rdchester@comcast.net	Each of us, together, finding ways to make our quality of life better, for one another, for our Communities. As a 1/10th member of the Chester Delegation, I would like to express appreciation to MassDOT for your imitative leading to this process. We have the opportunity to expand on what is already being done well and to maximize our existing infrastructure.. E/W rail-track... already in place and about to take a giant leap forward as PTC, Positive Train Control technology becomes operational. I didn't have the opportunity to speak with you personally the 12th, if I may take the opportunity now. First, We are currently Living the Dream of improved transportation for all, through the realization of this Study. With the final proposal Study/recommendation, we can create the future we need....by Inventing it Now. We must get it right and succeed, as the need is great and growing. During the past year, our rural W Mass COA Consortium collected the past 5 years of 'Ridership Report' data from FRTA (the Only Public transit we have) and conducted a 'Senior Transportation Survey'. The data underscored the very limited service model of FRTA, rendering it only minimally effective, and the 'Survey' clearly identified lack of service, incompatible schedules and no transport for recurring Medical appointments, as major problems in search of a solution. Second, the transportation solution equation, is not complex... existing infrastructure + lack of Public transit/growing elderly population + diesel or battery electric powered Rail cars (similar to NJ Transit) would provide a huge improvement, preserving and enhancing our way of life in rural W Mass, not to mention the positive economic growth it would ignite. Third, We urge the Study Committee, when determining the Final Six 'alternate proposals', to be inclusive of the key component of 'additional stops' and in particular, to include the 'Fired up and Ready to Go', Chester Station, located equidistant from Springfield and Pittsfield. It would serve as the collection reservoir for E/W passengers from the surrounding watershed population. Fourth, if there are questions and/or additional information Team Chester can provide...Please reach out to us. We are well prepared and committed to advocate for East West Rail reality, (aforementioned as the Dream) In addition to our Elected Officials, I have cc our Team Chester leaders, Barbara Pease-Huntoon, Chief of Party & Chairwoman,Chester Bd of Selectmen, Dave Pierce, Chester Station Master/Museum Director and Rich Holzman, our Secret weapon :) Thank's to your Team for bringing the discussion forward to our Living room of Democracy, Let's Win this for our Communities	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-16-19_2	John Pelletier	92 Central Ave Newton, MA 02460	john.f.pelletier@gmail.com	It is high time the state brought back scheduled rail service to points west of Worcester. Connecting our largest cities on a single line will allow for easier movement of people and ideas and allow more options for jobs and homes. As the Knowledge corridor commuter service starts its trial this year and CT rail expansion continues to be successful it is critical that the connection to Boston be expanded as well. As someone who uses the Lake Shore to travel to points west of Worcester, usually a couple times a year, and as someone who frequently travels to Worcester on the train to visit family or attend conferences, expanded service would give me far more opportunity. Opportunity to visit family in Hartford, attend fairs, visit cultural attractions etc. I think that an effort should be made to bring the trip time as close to driving at non rush hour times as possible, something around 2 hours would work well I think, obviously more stops means slower service, and the tracks are not as well upgraded as they are from Worcester to Boston...I think you would want at least hourly service once fully implemented, but starting with morning and evening service might make the most sense. It would be great if super basic platforms could be provided in-between, maybe at Brookfield (or east/west Brookfield), and Palmer, but again this should be something that comes in a phase two once demand potential is observed with greater service frequency. I think the service can work as an extension of the current MBTA commuter rail or as an expanded Amtrak service, both should be investigated. I believe the Worcester line is near capacity with equipment during peak times, so it might make sense to have it as an extension of MBTA service to minimize impact. I think, like the Cape Flyer, that service should be studied but then implemented and tweaked. We can study this until the cows come home, but nothing beats running service in a frequent consistent manner for a year or two pilot to see how it works. That said a pilot service would not give much of the economic potential and likely wouldn't cause people to move or switch jobs. In any case, I fully support a review and pilot of frequent service west of Worcester.	Email to Ethan
03-18-19_1	Benjamin J. Turon	Empire State Passenger Association (ESPA)	bjturon@gmail.com	Long email - see PDF (comments about connecting train to Albany; advocates for tilting trains)	Email to Makaela and Ethan
03-18-19_2	Mike Eagan		michaeleagan20@yahoo.com	The current study of train service to western mass must not be viewed solely as a benefit for those of us who live in western mass. How often do you hear that young people can not afford to buy a house in the greater Boston area? I recently read that the average price of a home in Needham is 1 million dollars. My home in Palmer would sell for less than 250k. Boston workers are forced to live in New Hampshire because of the high costs of homes around Boston. Expanding rail service to wmass is a WIN for Boston residents who are desperate for affordable housing. There is plenty of affordable housing in the Quaboag Valley with Palmer being the hub. We are the solution to Boston's lack of affordable housing.. The turnpike exit in Palmer makes it a natural for a rail stop which would allow quick access to the train. Known as the " town of seven railroads", a rail stop would service the greater Quaboag Valley. Palmer is centrally located between Springfield and Worcester. Government officials need to do everything in their power to connect the state with a modern rail service.	Email to Makaela
03-20-19_1	Paul Bukowski		paulbukowski@comcast.net	Please consider allowing a train stop in Palmer, at the Steaming Tender Restaurant. I think it would bring some much needed business and tourism into town. Our town is dyeing, so anything would help. Furthermore, it would allow local residents to travel to distant towns without having to drive and add to the already heavy traffic.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-20-19_2	Ben Hood		palmertrain@gmail.com	It was a pleasure to meet you briefly near the conclusion of MassDOT's East-West Rail Study open house in Springfield. I wish you well in your position as project manager for this important assessment of how to best restore rail service to towns and cities between Worcester and Pittsfield. I would like to bring to your attention a guest viewpoint published earlier this week by MassLive (the Springfield Republican) - https://www.masslive.com/opinion/2019/03/keep-east-west-rail-on-track-guest-viewpoint.html Our four activist groups who wrote and co-signed the article span western Massachusetts from east of Springfield to the Berkshires, and up the Pioneer Valley to Northampton & Greenfield. We are each focused on particular local & regional geographic areas, and collectively we are united in our view of what the Commonwealth as a whole needs. I would appreciate if you could accept the MassLive viewpoint (I have attached a PDF version of it) as a comment in response to the presentation at the Springfield public meeting last Tuesday, March 12. It expresses our grave concern about any move to replace trains with a bus service along the Mass Pike corridor. We strongly favor renewed, frequent train service to downtown locations in Palmer, Springfield, Westfield, Chester, and Pittsfield This is the only way to realize the benefits of transit-oriented development in our western Mass towns and cities with stations on the rail line. Trains have been the missing piece in our part of the state for many decades. At the conclusion of the East-West study, MassDOT needs to move forward quickly with restored passenger rail service for the economic benefit of the entire Commonwealth.	Email to Makaela
03-21-19_1	Barbara O'Donnell		bodonnell1025@gmail.com	Dear Ms. Niles, I wish to add my voice to those requesting the town of Palmer be included in any east west rail venture. I bought my home here in 2011 and due to a variety of circumstances have both my adult sons and their wives sharing this home. They all have primary and secondary degrees and are very employable in the Boston area. The commensurate salary would do wonders in achieving the payoff of student loans and the purchase of affordable housing of their own. This area is an underutilized gateway to so much of the Pioneer Valley and the benefits would certainly go both ways.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-21-19_2	Laurie Ball		beachgirl2u@hotmail.com	I am writing to overwhelmingly support the extension of the Commuter Rail to Western Massachusetts and establish a stop in Palmer. We desperately need the connection to Boston for many reasons: Ø Access to opportunities that Boston offers that are not and likely will never be available out here (Jobs, Colleges, etc.) Ø Access to world class healthcare, too many of our citizens have to now travel to Boston via the Pike (aka Parking lot) Ø Access to social and cultural events and activities Right now, we are forced to either spend hours in our cars crawling along the MA Pike...NOT good for the environment. The Pike is constantly overwhelmed with an excessive number of drivers, the road is constantly requiring repair due to excessive use and it is a gross waste of tax dollars. Let's get the train out here and get more cars off the roads. I personally am a huge fan of the rail. I live in Scituate (Greenbush line) up until 8 years ago. While I love the tranquility of Palmer, I miss having the option to jump on the train and go to Boston. My family still lives in Scituate, in order for me to visit – I refuse to drive the Pike anymore – I either take the Amtrak once daily train from Springfield to South Station and then Commuter Rail to Scituate or I drive to Worcester and take the Commuter Rail to South Station/Greenbush. I am personally witnessed the growth and revitalization the restoration of the Greenbush and Middleboro, etc., lines have net on the South Shore. The housing prices have sky rocketed and housing supply is very low. Comparatively, we have a surplus of land and housing in Western MA and the prices are below market. Open the rail and leverage our housing surplus for all the people in the Greater Boston area that cannot afford quality housing. Finally, the Peter Pan bus is not an option. It is no better than driving myself, I have taken it once, it is inconvenient and pricey. I understand the state is subsidizing the fares...just lining private business pockets given the very limited service. No money should be going to a private entity to provide the transportation services the state needs to step up and get this resolved once and for all. Palmer is the gateway to Western MA. We are the Hub for students traveling to the largest University in our state! The surrounding towns would equally benefit from a stop here, it makes perfect sense and could easily be built to mimic any of the stops along the Greenbush or Worcester lines...no fancy stations needed. Just a Commuter Lot and a Station Stop. As you may have guessed by now, I am rabid for this cause. I cannot stress enough how important this is to all of us in this area. We need transportation and we need it now.	Email to Makaela
03-21-19_3	Rachael DeShano		rachael.deshano@gmail.com	I just wanted to write in support of a passenger rail stop for Palmer, Massachusetts. The housing market in the eastern portion of the state is insane. Millennials have little hope of purchasing a house there, especially those who have any college debt. I know this story well because my husband and I lived on the North Shore and looked for a house that we could afford (as far out as the commuter rail lines would go!) for over two years. We got very lucky and found the one job in my industry in the western part of the state that will probably be available for years, which enabled us to move to Palmer and finally purchase a house. But with a passenger rail line stop, we would've been able to consider the town much sooner, as I would've been able to commute easily to my previous job in Boston. Palmer is well-located in the eastern portion of the state, enabling for commuters to drive to a rail stop from surrounding towns easily, plus it has some existing rail infrastructure in place. The town, and the eastern portion of the state in general, is primed for an infusion of young families and businesses, which I truly believe would come if a passenger rail to Boston was an option. I have several friends who are in the same boat we were not too long ago, and know that such a stop would pique their interest. Please, please consider making Palmer a stop on a future passenger rail line. It could greatly revitalize this area.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-21-19_4	Lorinda Baker	Palmer Town Council	lorindabaker@gmail.com	I am a Town Councilor for Palmer. We have been pressing for years for our chance at a vibrant economy by way of an East-West Passenger Rail stop in our downtown. We are geographically in a better position for this than any other community you are considering. We are the "Town of Seven Railroads". We have a beautifully restored train station and existing commercial rails in every village of Palmer. It is much easier to lay secondary tracks along an already established line than to engineer tracks where there currently are none. A stop in Palmer would not only benefit Palmer but every neighbor in our region. I wholeheartedly reject any attempt to stick a bus alternative in this plan. I frequently drive to Framingham or Worcester to grab the train but I have never, nor would I ever consider taking a bus. We have had the luxury of spending a good deal of time in Japan and Europe and we are woefully behind the times when it comes to public transportation. Let's look to the future and not to the past. A bus on the Mass Turnpike is no different than a car when it comes time for heavy traffic or an accident. Lastly, as a councilor who works tirelessly to try and make this community more attractive with little financial resources, a rail stop in Palmer would do more to spark the economy in this town than anything our council, planning board or town manager can do on our own. Western Massachusetts towns deserve economic equality. Please do not dismiss Palmer!	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-21-19_5	Kelley Slater		kelleyslater68@gmail.com	I never thought I'd find myself writing you a letter. Palmer Massachusetts is a small town known as the gateway to Western Massachusetts. For too long, Boston has viewed anything outside of the 495 as being a no man's land. That is evident in funding, job opportunities, and anything else you can think of for business development. A casino does not heal our employment woes. For far too long western Mass job candidates have had to choose between the only option given to them which is the Massachusetts Turnpike, or simply not applying for any jobs inside the 495. We have been denied the ability to find work in Connecticut due to commute issues, and not having a train available until recently that ran from Springfield to New Haven. This is the 21st century! I'm sure you're aware of that, but it needs to be said. We in Western Massachusetts are still technically in the early part of the 20th century. There are a few very well paying jobs in this area, the five college area Etc. But we are not enamored of being skipped over as if we do not exist! We do exist and not for popular reasons. Most rural towns out here don't even have bus service. We rely on our transportation if we're lucky enough to have it. Putting Palmer on the right track, pun intended, would allow the surrounding towns of Palmer to actually take a train to the opportunity that exists within Boston proper and outlying areas. We all have skills, we all have the ability to make a difference in our economic structure simply by being not fettered by the chains of long commutes. Of wasting gas sitting in traffic for hours on end when we can be happily transported by train to the areas in which we wish to work. Or at least have the opportunity offered to us to apply. When the Quabbin Reservoir was created there was a train called The Rabbit Run. It was flooded and it no longer exists. That train ran ran to Boston! Sure it was 19th century technology but it gave the residents of this forgotten Forest the ability to travel to Boston. Without having to go on Horseback or stage. Now the only option we have if we want to work in Boston in the outlying areas is to drive and that creates an Untold tax and expense for the person who's trying to better their life with better opportunities! Eric Glasser is currently offering \$10,000 for bostonians to move to Western Mass! He brags that we have cheaper rents that we are affordable versus living in the affluent sections of what has become a gentrified City. I say allow us to live where we live and earn a living that will allow us to thrive without so many roadblocks so to speak to achieve that goal. How would you like a three-hour commute? The traffic on the Pike is ungodly with people exiting via cars Boston area. You sit for hours idling. The Mass Pike was never created to handle the influx of traffic that we have right now. 50 years ago when it was created the population wasn't nearly what it is now for license driver's. We don't have a design flaw we have a population problem. Too many commuters not enough Road. Lighten the load on the Mass Pike reduced traffic incidences by allowing people to have the choice between taking a train and having to drive! By doing nothing you've only contributed to the problem.	Email to Makaela
03-22-19_1	Diana Caissie		leonardnimoyfan@gmail.com	I am a resident of Sturbridge, but spent much of my last 28 years in Brimfield right near the Palmer town line. Seeing the Palmer celebrated as the "Town of Seven Railroads" but never having a commuter rail that the population could benefit from was always frustrating to me. I'm urging you to extend commuter rail to Palmer and Springfield. Palmer is centrally located within the region between Worcester and Springfield. Many of our people commute to those towns and to Boston, so a rail stop here would reduce congestion on the Pike. Also, we have land and housing in this region at very reasonable prices, which could help relieve the housing crunch in the Boston area if there were good rail access to this area. Additionally, the rail stop could improve the economy in this region by attracting more people and businesses here.	Email to Makaela
03-22-19_2	Janice		janicemountain@hotmail.com	Hello there. Please please please push hard for a rail stop in Palmer. The reasons are many! Don't underestimate the incredible value for so many.	Email to Makaela
03-22-19_3	john palmere		islesrbest@outlook.com	I've lived in Palmer since I was born in 1955. Over the years I've seen Palmer loose alot of businesses. I think a rail stop between Palmer and Boston would help this town immensely. Also I would love being able to take a train to go to a Red Sox game. Please bring this to Palmer.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-22-19_4	Maryellen Mcleod		maryellenmcleod@hotmail.com	I am a new resident in Palmer. I bought a 3 bedroom house here in June. I am from the Woburn area I moved here because it is much more affordable to live but once here realized that my quality of life quickly got better since I no longer have to sit in an hour's worth of traffic twice a day to get to work. I believe many other Boston area residents would absolutely love it here too. That's why I am hoping for there to be a rail stop included here. It could not only bring people to Palmer but it would give Palmer residents a way to commute to work and use the rail to travel to entertainment and medical appointments.	Email to Makaela
03-22-19_5	Timothy Nale		timothy.nale73@gmail.com	I never thought I'd find myself writing you a letter. Palmer Massachusetts is a small town known as the gateway to Western Massachusetts. For too long, Boston has viewed anything outside of the 495 as being a no man's land. That is evident in funding, job opportunities, and anything else you can think of for business development. A casino does not heal our employment woes. For far too long western Mass job candidates have had to choose between the only option given to them which is the Massachusetts Turnpike, or simply not applying for any jobs inside the 495. We have been denied the ability to find work in Connecticut due to commute issues, and not having a train available until recently that ran from Springfield to New Haven. This is the 21st century! I'm sure you're aware of that, but it needs to be said. We in Western Massachusetts are still technically in the early part of the 20th century. There are a few very well paying jobs in this area, the five college area Etc. But we are not enamored of being skipped over as if we do not exist! We do exist and not for popular reasons. Most rural towns out here don't even have bus service. We rely on our transportation if we're lucky enough to have it. Putting Palmer on the right track, pun intended, would allow the surrounding towns of Palmer to actually take a train to the opportunity that exists within Boston proper and outlying areas. We all have skills, we all have the ability to make a difference in our economic structure simply by being not fettered by the chains of long commutes. Of wasting gas sitting in traffic for hours on end when we can be happily transported by train to the areas in which we wish to work. Or at least have the opportunity offered to us to apply. When the Quabbin Reservoir was created there was a train called The Rabbit Run. It was flooded and it no longer exists. That train ran ran to Boston! Sure it was 19th century technology but it gave the residents of this forgotten Forest the ability to travel to Boston. Without having to go on Horseback or stage. Now the only option we have if we want to work in Boston in the outlying areas is to drive and that creates an Untold tax and expense for the person who's trying to better their life with better opportunities! Eric Lesser is currently offering \$10,000 for bostonians to move to Western Mass! He brags that we have cheaper rents that we are affordable versus living in the affluent sections of what has become a gentrified City. I say allow us to live where we live and earn a living that will allow us to thrive without so many roadblocks so to speak to achieve that goal. How would you like a three-hour commute? The traffic on the Pike is ungodly with people exiting via cars Boston area. You sit for hours idling. The Mass Pike was never created to handle the influx of traffic that we have right now. 50 years ago when it was created the population wasn't nearly what it is now for license driver's. We don't have a design flaw we have a population problem. Too many commuters not enough Road. Lighten the load on the Mass Pike reduced traffic incidences by allowing people to have the choice between taking a train and having to drive! By doing nothing you've only contributed to the problem.	Email to Makaela
03-23-19_1	David Golden		davegolden1@comcast.net	I am writing to express my wholehearted support for reopening a Palmer rail stop on the proposed east-west rail line. With it's access to major routes including a Mass Pike exit, Palmer represents a great opportunity for a renaissance in this area, an area feeling the strains of depressed economies and decreasing populations. As the mills that this area was built on have all but closed, there are limited job opportunities in the Palmer and surrounding communities and a railroad stop would be a catalyst for new, affordable growth in manufacturing, retail, services and housing starts. This needs to be an option that is not overlooked but one given a full press chance of becoming a reality. As the entrance to Western MA and proximity to central and eastern MA, a rail stop makes sense to not only help ease traffic concerns but also give hundreds of thousands of MA residents the possibility of home ownership and access to an unlimited amount of local amenities and resources. A win-win all around! I look forward to your full consideration of this hopeful future resurgence in Western and Central MA!	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-23-19_2	Nancy Capron		nancap21@gmail.com	I am enthusiastically in favor of a high speed train from Western Mass to Boston. As a person who lives in poverty with no hope for my economic circumstances to improve, my foremost concerns are anything that would make my material reality worse. While increased housing costs may not be directly caused by accessible transportation, there is a evidence of a correlation. Our Republican governor Baker has acknowledged that Massachusetts is experiencing a housing crisis, while his attempt to increase housing stock is welcome it is disappointing that he does not prioritize affordable housing. United Way's ALICE Asset Limited, Income Constrained, Employed Data shows that 48.8 % of folks living in Hampden County are below the ALICE Level, meaning that 48.8 percent of folks are struggling to maintain themselves housing food healthcare and transportation. If you take an average of the 4 Western Mass counties, there are on average 42.4 % of folks who are struggling to make ends meet. This data is consistent with reports that 42 % of working Americans make less than \$15 dollars an hour, that many households could not manage a crisis that cost \$400, that there are 7 million folk that are behind in their car loan payments, and that nearly 50% of Americans will experience poverty in their lifetime. My concern is that the availability of fast transit to Boston will attract people from the Boston Metro Area to Hampden County and increase both competition and an increased speculation in the housing market. National Low Income Housing Coalition (NLIHC) states that Massachusetts is short 169,809 rental units for the 32 percent of renters that are extremely low income. They estimate the need for rental units in the Western Mass area is 52,000. I know through my life experience that the only thing that causes poverty is Public Policy. I can state with out any hesitation that no person is personally responsible for their own poverty. The responsibility for poverty here in America lies squarely at the feet of our elected officials. In Massachusetts that means predominately members of the Democratic party. My hope is that now is the time when the makers of policy are going to view their fellow citizens state of poverty as a priority and enact legislation that alleviates that poverty and in legislation such as the expanded the rail system have as its foundation a ethic of doing no further harm to the poor of Massachusetts.	Email to Ethan
03-24-19_1	Adam Garvey		adamjg9@comcast.net	Thank you for reading my email with hopeful consideration for putting in a train stop in Palmer, MA. Putting Palmer on the right track would open up the whole economy in Western Massachusetts. Palmer is centrally located to everything! The downtown area is just a skip from the Pike which would be beneficial for commuters to park and ride. A revitalization of the downtown is exactly what Palmer could use. Many of the store fronts are up for lease or sale and bringing in a train would attract more people and businesses to the downtown area. Currently, there are just too many commuters and not enough road. The Pike traffic can be horrible, making trips to Boston unbearable. Thus, I notice that if we want to go see a show, or dinner we tend to spend our dollars in Hartford, CT as the commute is just so much easier. I would love to keep our dollars in the state and this this station would be the perfect solution for this area. Palmer and the surrounding towns have plenty of room for development and at affordable prices. A Palmer station would offer much more affordable housing options compared to Boston and other areas. There are many commuters in the surrounding towns and this station would be the saving grace for work/life balance. Many of us have sat in traffic for hours and a train would just be so convenient.	
03-26-19_1	Rick Patoski		rick.patoski@gmail.com	lengthy email (see PDF)	Email to Ethan
03-26-19_2	Elise Anton	42 Beech St., Palmer MA 01069	ekanton@comcast.net	I would like to register my support for a rail stop in Palmer. We are very centrally located and have historically been a rail crossroads. My family lives very near the turnpike in Palmer, and are alarmed at the rapid increase in daily and nightly traffic. If we stand on the Flynt St. bridge over the pike, we can see how many cars have only one passenger. A convenient and affordable form of public transportation in every direction from Palmer would decrease the pollution and noise caused by all these one-occupant vehicles, and perhaps also the accident rate. It would certainly cut down on the slow-downs and traffic jams happening more and more frequently in this area of the turnpike. Commuting by train could be much more relaxing than commuting by car. Palmer and surrounding towns seem to be becoming "bedroom towns" for Worcester and Boston, as property values go up as you head east, so more and more folks seem to be commuting from this area. Let's take a lesson from many European countries and promote public transportation. Please consider a Palmer Rail Stop.Thank you.	Email to Makaela
03-28-19_1	Ruth Curtin		rb.curtin@verizon.net	see PDF of letter (comments about rail stop in Palmer)	Comment form mailed to MassDOT

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-28-19_2	Ryan Lafond		ryan.b.lafond@gmail.com	I was unable to attend the public meeting in Amherst but wanted to share a couple of thoughts: - a rail service with sub-90 minute travel time from Springfield-Boston would be our preferred method of travel for ad hoc visits to Boston, e.g. going to an event. Naturally consideration would be given to how convenient the timing was, but the Pike and Boston parking are such a pain I would be flexible there. - biggest benefit is employment opportunities. If Springfield to Boston was 75 minutes or less then I think Boston would be a realistic job market. Train availability would have to mimic existing commuter rail schedules, meaning most inbound available 5-9am and outbound 4-7pm, roughly speaking.	Email to Ethan and Makaela
03-28-19_3	Taylor Williams		taylorgowillia3@gmail.com	I am writing to express my support for an east to west high speed rail. I work in Tech and moved from Boston to the Bay Area 4 years ago. I am now looking to move back to the Northeast. Much of my family is based in western mass and I would love to be near them. I can say without exaggeration the lack of any current feasible public transportation is a top 2 consideration and deterrent to moving back to the state. The reason I would value this real -- The company I work for is based in Boston, I will need to get there a few times per month, sometimes overnight sometimes day trips. After trying the bus a few times I would not include this as a viable transportation option for folks traveling for business. In summary, Massachusetts is losing out on least one and I venture to bet many other highly paid remote tech workers due to the lack of intra-state transportation options.	Email to Ethan and Makaela
03-28-19_4	Rob Kusner	University of Massachusetts at Amherst	profkusner@gmail.com	Thanks for sharing the notes from the 12 March open house in Springfield. If I'd been in town then, I would have participated and commented. I've a professor of mathematics at UMass Amherst since 1988, and have served at chair of Amherst's Public Transportation Committee (in the 1990s and early 2000s), as chair of the DCR's Norwottuck Rail Trail Advisory Committee (between 2007 and 2016, at former U.S. Rep. John Olver's behest, leading the redesign and reconstruction of this alternative transportation route – and 12-mile long linear park – joining Amherst with Northampton), as a member of the Amherst Select Board (from 2005 to 2008 – chair for some of the term), and an Amherst Conservation Commissioner as well. Many times over the last 3 decades, I've pointed to the need to reduce the number of cars that UMass students (largely from the Boston metro region) bring to the Amherst area. This would help reduce pollution and congestion in our area, and it would also take advantage of a huge "captive" transit-friendly cohort, many of whom rely on PVTA buses when they're in our area, but who revert to private cars all too often (e.g., to return home on weekends). A great way to do this – and at the same time providing reliable, work-on-board, public transit for those who need to commute regularly to and from the Boston metro area for things like work and education, or semi-regularly for medical appointments, sporting events and (for folks like me) even academic collaboration (mostly with colleagues from the Boston-area institutions, but also including access to Logan Airport for more distant collaboration) – would be to redevelop reliable, comfortable (but not necessarily super-high-speed) East-West Passenger Rail between Boston and Springfield, with coordinated a transfer station in Palmer, connecting with a fast rail-shuttle between Amherst and Palmer. There is already enough bus (Peter Pan) and private car traffic to justify an AM-PM commuter version of this, but transforming from a car-centric to train-centric transportation system could easily develop ridership on this route by an order of magnitude more – possibly testing the limits of the CSX RoW between Worcester and Palmer, and maybe also the current single-track RoW between Amherst and Palmer, but worth exploring. If we're going to get more folks to turn from private cars to transit – especially the most transit-amenable folks, who tend to be students or academics (who've seen it done in other parts of the world like England, France, Germany, Japan, and especially China) – we should be linking our flagship public university (UMass Amherst) with our main population center (the Boston metro region) via rail – as it was at the time of UMass's founding (as Mass Ag College) a century and a half ago!	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
04-01-19_1	Pat Stockwell		stockwellp@charter.net	Unfortunately I was not able to attend the meeting in Springfield. However I have read the materials and thought I'd comment. I am retired living in central massachusetts and would have loved an express rail to Boston during my career in technology. It would have greatly expanded my job opportunities, for which I was not willing to fight the traffic or the limited availability of trains at the time. I also love western Massachusetts and the Berkshires specifically. North Adams in particular is experiencing somewhat of a renaissance via tourism and the arts and is the location of another great Massachusetts college, MCLA. I'm sure just like Westfield students they would love the advantages an east-west rail from Pittsfield would offer. I agree with all the public comments, except about the maglev as I do think all options including the latest technology should be on the table. I understand the personas you've developed which represent the potential demand as it stands today, covering all the people who might need or want access to Boston. The Rosa persona seems to align most closely with many of the comments regarding the east-west rail as a way to pull Boston area residents west to live while continuing to work east. The idea of course being lower cost of housing and better quality of life. Personally I believe a robust east-west passenger rail system could potentially create a reverse osmosis type of situation where even the businesses get pulled west from the city once they can entice skilled workers from all over the state. A place like Pittsfield located less than an hour from Albany International and the area with its old factories, mills and warehouses waiting to be renovated and offering cheap rent should be no less attractive to high tech companies than those in Boston, if they can lure the employees. As a central Mass resident wouldn't job opportunities with reasonable commutes both east and west be great?	Email to Makaela
04-07-19_1	D. Phillips		dphillips8_99@yahoo.com	I believe that the East-West Rail Study can be the basis for providing not only fast, frequent service between Springfield/Pittsfield and Boston, but fast, frequent service between Worcester and Boston and, even, Worcester and New York City. Please see the attached comments. Please add me to the mailing list for the Study.	Email to Makaela
04-09-19_1	Cara S. Radzins	CRCOG	cradzins@crcog.org	I attended last month's public meeting for the East-West Passenger Rail Study, and I was encouraged to see such a strong turnout. I appreciate your willingness to accept comments at this critical, early stage of the study, and I would like to share some feedback from the Capitol Region Council of Governments (CRCOG), the Metropolitan Planning Organization (MPO) for the Metro Hartford area. Attached please find a letter that CRCOG's Executive Director, Lyle Wray, previously transmitted to Congressman Richard Neal regarding the scope of the East-West Passenger Rail Study. We encourage your Study Team to consider this letter and its core contentions, which are as follows: • We are very concerned that the East-West Passenger Rail Study does not seem to include an analysis of the ridership potential from and to locations in Connecticut and believe the Capitol Region should be considered when calculating the ridership potential and economic benefits of the study's alternatives. Enhanced rail service in the East-West Corridor would be transformative for both Connecticut and Western Massachusetts. Just as the Hartford Line between New Haven, CT and Springfield, MA considered Western Massachusetts in its planning, we believe that it makes sense to include North Central Connecticut in the East-West Passenger Rail Study. • It appears that the scope of this study includes limited analysis of the potential for increased economic development. Increased economic development, such as the potential for transit-oriented development, should be incorporated into the study as a key objective against which potential alternatives are measured. The Pioneer Valley and the Capitol Region have long recognized our interrelated economies and shared assets through our Knowledge Corridor Partnership. We jointly undertook a \$4 million Sustainable Communities Initiative project and have worked closely to promote Bradley Airport and the Hartford Line. We at CRCOG are excited about the prospect of rail service improvements between Springfield and Boston, and we encourage MassDOT to incorporate the Capitol Region into the East-West Passenger Rail Study scope in recognition of our shared economy, history of collaboration, and the reality of the larger passenger rail market.	Email to Makaela and Ethan

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
04-22-19_1	Bob Daley		rdchester@comcast.net	There is no Rail Station stop in the 50 mi between Springfield & Pittsfield. We need to address the lack of access to Public transit, where virtually none exists, before attempting to reduce commuter times. Re opening Chester Station, would provide a reservoir for the surrounding watershed population, which includes 29 Town's within a 20 mi radius. This would provide a great return on investment, on our existing infrastructure, without embarking on huge new projects. With Positive Train Control nearing it's operational phase and the documented need for Public access, via completion of a regional transportation survey and the examination of 5 years of FRTA ridership reports, both highlighting the growing need in rural West Mass... we are at critical mass of the 'urgency of now'. For decades we have expanded infrastructure for personal/commercial vehicle's, at the expense of Community vitality. Much, now by-passes 'Main Street' in so many of our Town's Public transit has not kept pace. Instead of massive new build, we need to scale up what we are currently doing well, maximizing existing Rail systems. Adding a commuter stop in Chester is the right thing to do, for the right reasons, at the right time. For our rural way of life to survive, we must value Community resilience over commute times, provide improved access, take resourceful, smart steps, adapt and create the future we want... the future our neighbors are in need of...today.	Email to Makaela and Ethan
04-22-19_2	Dave Pierce	The Chester Foundation, Inc.	dpiercedlp@aol.com	Hi Makaela, et al: Attached find some observations from Chester we hope you might share with the Committee.	Email to Makaela and Ethan, et al
05-03-19_1	Abaigeal Duda		abaigeal_duda@yahoo.com	I want to state my support for having a rail stop in Palmer. I grew up in Palmer (Bondsville), but after college, I moved to Boston, where I lived for 20 successful years. When my mother became ill almost 10 years ago, though, I returned back to the family farm to care for her and look after my father and the farm. Finding work out here after working in administration at large museums in the Boston area was very difficult, and I cobbled together part-time jobs as a tutor, a house cleaner, a baker, a nonprofit administrator at a tiny organization, etc. Today, I am still under-employed and struggling to find work that fits my qualifications. I am now also looking after my father, who has dementia and who turns 90 this year. While I don't think that I have the energy (nor a vehicle that could stand the wear and tear) for a driving commute to Boston, I would certainly jump at the chance to use a passenger train for the commute if it were available. It could have made a tremendous difference for me and for the farm if it had been available when I first moved back to Western MA. I hope that you can make better opportunities open to others in the future if you adopt a passenger rail line to Boston with a stop in Palmer.	Email to Makaela
05-05-19_1	Dave Pierce	The Chester Foundation, Inc.	dpiercedlp@aol.com	Hi Makaela, et al: Attached find some observations from Chester we hope you might share with the Committee. This may require 2 Emails to include all photos.	Email to Makaela et al
05-02-19_1	Camille Collins Lovell		camillecollinslovell@gmail.com	Hello - I am a resident of Brimfield, who works in Boston, and travels frequently to NYC and DC for work. As you know there is no public transportation serving the small towns in south central MA. So I was excited to learn of the discussion of possible rail service somewhere near me. I was unable to attend the Palmer Rail Stop Study Meeting on Sat. March 16th - I think that was part of the East-West Passenger Rail Study that you manage? At any rate, I am interested in contributing to the study or just getting updates, if that is possible. Thanks!	Email to Ethan

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
05-21-19_1	Heidi C. Bara		bara.heidi@yahoo.com	As a citizen of Palmer, Massachusetts, I am asking you to consider our town of Seven Railroads to be a passenger stop on the East West Rail Line connecting Boston to Springfield. Our location is centrally located and would benefit 20 communities that surround our town. We already have a historic train station with a good location near downtown. A train stop in Palmer will help revitalize our downtown area as well as surrounding towns. The Quaboag towns have affordable housing, something Boston would be interested in and eastern Massachusetts has job opportunities that the Quaboag Region would be able to get to by rail. Palmer is still a rail crossroads, both for east-west and north-south trains, but currently without a passenger stop. Workers and students in the Quaboag towns need better transit options connecting them to employers and educational institutions. We need environmentally friendly transportation, our highways are congested, we need less cars on the road not more. People who commute by train can enjoy the scenery, get work done or take a nap, a lot less stressful than driving a long commute, with too much traffic. I would love to be able to get on the train here in Palmer and get to downtown Springfield for a hockey game or night out in less than a half hour. A trip to Worcester for a baseball game or concert in less than 45 minutes. I like to travel to Boston to see our talented sports teams, the Celtics and Bruins as well as the Boston Science Museum and all the rich history of our state capitol. I would visit Boston more frequently if we were able to commute by train. Thank you for your consideration, hope to hear from you soon.	Email to Makaela
05-26-19_1	Dave Pierce		dpiercedlp@aol.com	Work continues apace on the west end. Two of the private grade crossings lamented on your poster at the last East/West meeting have been removed in Chester. (see attached.) Perhaps more; I'm looking into it. It's as if CSX is preparing the line to order for commuter rail service. It will be absolutely state of the art. As curves are unavoidable in the northeast, including on the Northeast Corridor, the Acela route, there will be virtually no rail mileage in the Commonwealth built to a higher standard. And not an unknown quantity operationally, as MA DOT already owns the east end and has a working relationship in place with both Keolis and CSX. You won't be able to afford not to acquire it. Further updates to follow.	Email to Makaela, Ethan, et al
05-30-19_1	Michael Moran	Baystate Wing Hospital	sszczebak@townofpalmer.com	SEE PDF OF LETTER (support for East-West Study)	Letter to addressed to Makaela; mailed to Palmer Community Development Director
06-02-19_1	James Higby	Chester Board of Selectmen	jamehigby@gmail.com	For consideration by the East-West Rail Study: The statewide benefits of passenger rail in Chester Chester is situated in the only major east-west valley traversing southwestern Massachusetts. It is for this reason that the Western Railroad was originally sited there, as well as the original statewide east-west turnpike, now route 20. The route 20 corridor is just as geographically advantageous today as it was in the 19th century, evidenced by the dozens of freight trains which pass through it every week. With traffic congestion in metropolitan areas steadily increasing, this ingenious historic railroad presents itself as a valuable resource to cope with the great challenges of modernization. The incorporation of a rail stop in Chester will be greatly beneficial to the local community, and also to the entire state of Massachusetts. The town's workforce is largely commuters who use state highways to get to and from work; a public transportation option would not only allow the local population a more efficient commute but also provide a reduction in road depreciation and emissions. A quantitative model of these effects would be an excellent addition to the study, if one is not already underway. We are now presented with a unique opportunity to promote prosperity in the region by re opening the station in Chester. The effects will be felt statewide, and on a national level will help define Massachusetts as the forerunner of efficient and reliable transportation solutions for a sustainable future.	Email to Ethan, et al
06-03-19_1	Seth Kershner		sethkershner@hotmail.com	I read with interest the recent letter to the Berkshire Eagle (May 31) from a Chester resident concerning the need for a rail stop in Chester. As a Hilltown resident and frequent Amtrak user, I support this proposal and urge your office to take the matter under careful consideration.	Email to Makaela and Rep Smitty
06-03-19_2	Roy M. St. George		roy@moultonins.com	I am writing to you in support of the Palmer Rail stop. My wife and I own 3 insurance offices in the area. Palmer, Ware and Belchertown. I feel a stop would be beneficial to all the businesses in the area. It would also be great for people like me who like to travel to Boston for weekends or sporting events to hop on the train rather driving. The benefits are substantial to our rural area for people who may not have transportation as well.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
06-04-19_1	Linda G. Leduc	Palmer Town Planner	lleduc@townofpalmer.com	I am happy to present you with the attached Town of Palmer’s E-W passenger station case study. Please share with the MassDOT consultant team at your earliest convenience. We hope that the compelling information within this document receives high consideration when screening for the criteria of the six E-W rail corridor alternatives and that Palmer is ultimately chosen as an intermediate rail stop when the final three alternatives are determined. I look forward to attending the next Advisory Committee meeting this June where a summary of the existing conditions, the alternatives screening criteria, and the six proposed alternatives will be presented for our consideration. In the meantime, if you could provide me with any details as to the anticipated meeting date and adjusted study timeline, it would be greatly appreciated.	Email to Makaela and Ethan
07-16-19_1	Town of Ware Board of Selectmen		mmidura@townofware.com	SEE PDF OF LETTER (Board voted to support stop in Palmer)	Mary Midura emailed the letter to Makaela
07-29-19_1	Sen. Hinds, Rep. Pignatelli, Rep. Farley-Bouvier, Rep. Barrett, Rep. Mark	MA Legislature	bethann.steiner@masenate.gov	SEE PDF OF LETTER (opposition to bus shuttles)	Letter to Sec. Pollack and Astrid Glynn
07-23-19_1	Patricia D. Carlino	Town of Lee Selectboard		SEE PDF OF LETTER (support for Chester station)	Letter to David Pierce; handed to Makaela at the July 23 AC meeting
07-23-19_2	Daniel Elihu Kramer	Chester Theatre Company	daniel@chestertheatre.org	SEE PDF OF LETTER (support for Chester station)	Email to David Pierce; handed to Makaela at the July 23 AC meeting
07-31-19_1	Thomas Matuszko	Berkshire Regional Planning Commission		SEE PDF OF LETTER (opposition to bus shuttles/alternatives 1, 2 and 5)	Letter to Sec. Pollack
09-03-19_1	Tracy Opalinski	Ware Business & Civic Association	topalinski09@gmail.com	SEE PDF OF LETTER (support for Palmer station)	Letter to Makaela Niles
09-03-19_2	Travis Pollack, AICP	Metropolitan Area Planning Council	TPollack@mapc.org	SEE PDF (lengthy email - recommendations for data collection)	Email to Makaela
09-05-19_1	Ed Pletman	Camp Ramah in New England	edpletman@campramahne.org	I’m writing on behalf of Camp Ramah in New England, a large children’s overnight camp located in Palmer MA. We enroll over 900 children each summer and employ over 300 seasonal staff on top of our 20 year round staff. We’ve been located in Palmer for over 60 years and our camp has prospered and grown over this time period. I’m writing to offer our support for the consideration of bringing the Hi Speed Rail service to Palmer and Western MA. A stop in Palmer would have a tremendous impact on our ability to provide a wonderful option for our staff and families to utilize rail service to travel directly back and forth from Palmer to Boston or western MA. Each week all of our staff have a day off and many, without cars, struggle with making plans to get to Albany or Springfield for their time off. A stop in Palmer would make it incredibly easier for us to facilitate their travel to their time off destination. In addition, during the summer season and year round we have families, campers and guests traveling to us from Boston who I believe would find direct rail service to Palmer very, very convenient. I’m joined by our CEO, Rabbi Ed Gelb, and our Board of Directors in expressing our support for the addition of this rail service and we would be very happy to provide any additional support or comments that might be helpful.	Email to Makaela
10-17-19_1	Daniel D’Alma	IBEW Local 7	none provided	SEE PDF OF LETTER (support for project and stop in Palmer)	Letter to Ethan
10-07-19_1	Rene Wood	Town of Sheffield BOS	none provided	SEE PDF OF LETTER (support for alternatives 4, 5, 6 - opposed to bus service)	Letter to Sec. Pollack

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
11-15-19_1	Dave Pierce, Bob Daley, Rich Holzmnn	Team Chester	rdchester@comcast.net	The necessity for a Statewide Rail strategy, one of transformational scope & scale, is well documented and would be in the enlightened self interest of all, as it expands prosperity and influence across the Commonwealth. Expanding our World class infrastructure to bring Commuter Rail to West Mass, will link populations, for new living, work, travel options, sustain our rural way of life, both for for current residents and those wishing to escape the congestion & high cost of East Mass. Including Chester & Palmer Stations in the Final proposal, will build on the ongoing success of North/South Rail, by using those Stations as ridership catchment reservoirs for surrounding populations. Chester Railway Station, the Historic Rail hub since 1841, could be passenger ready with minimal expense. It is sited 50' from the tracks aka 'Railway to the Moon'. It is secured by fencing, has Station side Parking, is handicap accessible, needing only a paved walkway and ATS to dispense tickets. As you work through your progressions and arrive at a recommendation, please view solutions through the prism of Equality, Liberty, Fraternity, leading to commonly realized wealth for all Citizens. Equality of access...the need for improvements in the East can no longer be at the expense of sacrificing the needs of the West. Horizontal equities, in terms of benefits to users, in the form of an opportunity for transit where none exists and for non users, in the form of reduced emissions, traffic congestion and expanded living option's in West Mass. It is the right thing to do, for the right reasons and at the right time.. Liberty, to have the choice to live West of the 'Metro' area and travel/work on Commuter Rail. Perhaps the greatest benefit will be the connectivity of cultures, effectively living worlds apart now, while separated by only 100 miles. Our compact State presents an advantage for resilience and the opportunity for clean energy savings. Fraternity, restoring faith in Government, as we work together for common purpose...the greater good. Applying this Formula will lead to solutions for All Massachusetts Citizens. The two most important letters in our Democracy are 'W' & 'E' , as in We the People. We must leverage this best in a lifetime opportunity, to invent the future using Commuter Rail. Reach too high Reach too far Reach for the Whole of the Moon	Email to Ethan
11-21-19_1	John Garrett		johnjamesgarrett@gmail.com	These meetings were originally scheduled for the fall and are frankly not well publicized for such an important project. I fear that the governor has no interest in transit based on both his statements about not needed new revenue to fix the T and the need for "reform" and blog's like Alon Levy's, the transportation expert's. Mr. Levy claims that MassDOT sandbagged the North-South Raillink and I am inclined to believe him. My question is twofold: 1. What exactly is the methodology of the analysis being done & why the unexplained delay? & 2. Has MassDOT addressed the concerns of transit experts like Mr. Levy & is he wrong in claiming that it was a political and not a transit decision to take no action and therefore spend no money? (He strongly criticizes SSX as being provincial thinking about a regional problem) Yours, John Garrett PS - I also realize that you are not the only person who has been assigned to this project as manager and you may not be privy to the calculus inside Baker's head. Here's the link to Mr. Levy's blog, you may be aware already of course. https://pedestrianobservations.com/2018/06/20/massachusetts-sandbags-the-north-south-rail-link/	Email to Makaela
11-21-19_2	Barbara Pease Huntoon	Chester Board of Selectmen	bjphuntoon@msn.com	Thank you so much for the update on the East-West Rail Study! It's much appreciated. Chester is excited about the possibilities E-W Passenger Rail can bring to our area and optimistic of our inclusion in the "Final Three". We plan to be at the Spring meeting in full force. May you have a wonderful Thanksgiving and enjoy the special times of all the Holiday Season!	Email to Makaela
11-21-19_3	David Levitz		davidlevitz@gmail.com	With the availability of the Transportation Infrastructure Finance and Innovation Act (TIFIA) and Fed lending rates at historically low levels, why isn't Mass Dot pushing to get the study completed sooner? Instead, it seems the Study Schedule timeline is behind schedule i.e. the Public Informational Meeting scheduled for Nov 2019 has been delayed til next year. This is a waste of taxpayers' resources, most would agree the best and obvious solution is to place new electrified track along 1-90. The economic benefits for the entire state, including Boston, are crystal clear.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
11-23-19_1	D. Phillips		dphillips8_99@yahoo.com	The materials presented here show a significantly improved set of 6 alternatives compared to the ones I remember seeing posted on the website sometime in the summer. Most notably, Alt. 6 has been modified to divert off the Mass Pike to access the existing Union Stations Worcester and Springfield (as I suggested in my last email) better serving the traditional regional centers. This alternative is my clear favorite as I think that it is the only one that would be able to divert a significant number of auto drivers and support economic development. However, I think that Alt. 6 could be further significantly improved by reducing its travel time east of Worcester. Please re-consider the Boston-Worcester routing suggested in my earlier email, staying on the existing routing from South Station to Westboro and constructing a new cross-country alignment to about Plantation Street in Worcester, avoiding the portion of the existing alignment which drops south of Lake Quinsigamond. This general routing between Worcester and Westboro was considered in the NEC Future EIS for the Worcester alternative. It would reduce the Boston-Worcester distance compared to the existing railroad by about 2.5 miles and by about 3 miles compared to the even more circuitous routing shown in the current version of Alt. 6. I understand trying to stay in existing "transportation corridors" but I think that the advantages of this routing make this exception to the general policy worthwhile. If the North Grafton MBTA station were moved about 2 miles north to South Shrewsbury commuter rail riders would also benefit. Adding a third track between Framingham and about Rt. 128 has been proposed by others to improve the commuter rail service; service to Western Massachusetts would also benefit. Staying on the existing rail route for most of the Boston-Worcester segment would minimize the cost of this alternative. There is inconsistent handling of a Palmer stop in different parts of the material; it can/should be included.	Email to Makaela
01-05-20_1	Mark Shapp		mshapp802@gmail.com	SEE PDF OF EMAIL	Email to Ethan and Makaela
01-28-20_1	Claudia Cass		nokaoi1960@gmail.com	I have a prior commitment on 2/12. Peaseemail me all info. We need this rail from Bostonto Pittsfield!!	Email to Makaela
01-27-20_1	Paul Ravina		ravinasql@gmail.com	SEE PDF OF EMAIL - request for public meeting to be held in Worcester; follow up comments on where old train stations were location	Email to Makaela
01-29-20_1	Charles Hagelgans		chuckcmk@gmail.com	I am excited about the possibility of the East-West rail line. I live in upstate New York. The central medical health facility near here is Albany Med, and I have found them lacking in every specialty area in which I have consulted them. I have therefore journeyed to Mass General in Boston on occasion for my healthcare. The trip on the Lake Shore Limited is long and slow. If I could park my car in western Mass near I-90 and take a speedier East West line into Boston, that would be great. Please count me in as a potential rail patron. Good luck to you and your project.	Email to Ethan
02-05-20_1	Ben Heckscher	Trains in the Valley	benheckscher@gmail.com	SEE PDF OF LETTER TO GOV. BAKER (NNEIRI study, ridership)	Email to Makaela
02-07-20_1	Julian Hartmann-Russell		julianhr@gmail.com	I can't come to the next public meeting but wanted to pass on a note that I think the state is vastly underestimating potential ridership on a Western Mass-Boston rail connection, particularly if it is competitively priced with bus service or priced using a commuter rail scheme. I think ridership would be pushed higher if the two current Valley Flyer AM trains connected with eastbound service from Springfield, so that people in Greenfield/Northampton/Holyoke could easily take the train all the way to Boston. There is huge demand in Northampton and Amherst for improved transit to Boston. I look forward to seeing the next steps in development of this project.	Email to Makaela
02-07-20_2	William Meehan		meehan.w@husky.neu.edu	I believe the East-West Rail Link is essential to the future of the Commonwealth. High-speed rail will link Massachusetts together in a more effective, sustainable way than any other option. The recently released ridership numbers seem inaccurately low. I would personally take advantage of a train to Tanglewood multiple times each summer. I also know people who would move further west for affordable rent if they still had a fast commute to Back Bay or South Station. Furthermore, your team should add an option terminating at Albany-Rensselaer, as the higher population of the New York Capital District may help anchor ridership and fill trains in the reverse direction.	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-10-20_1	Jerome Kaplan		jhkaplan@bu.edu	Unfortunately, I cannot attend the meeting this Wednesday in Springfield. However, I would like to convey some concerns/suggestions which, I'm sure, you and your committee have already considered: • Amtrak's lone cross-Mass. service, the Mass. section of the BOS-CHI Lake Shore Limited, trains 449/448, is chronically late, due to CSX freight interference. • Until such time as Boston - Montreal rail service is restored (probably never), connecting rail service to/from Amtrak's Adirondack at ALB (Albany-Rensselaer) should be considered. Not only would this provide rail service to/from Montreal, it would also provide additional service to/from Western Mass. Either connecting Amtrak trains or MBTA trains extended to/from ALB are options. • There should be a rail connection to/from Amtrak's Vermonter at Springfield. Perhaps an extension of MBTA service to/from Springfield could provide this connection. As an alternative, rail infrastructure is already in place and could provide direct rail service between Boston and Vermont via Palmer, MA (which features a magnificent HH Richardson depot, now a restaurant). • Service to/from the northern Berkshires (Williamstown, North Adams) should be considered via the "Patriot Corridor" owned by Pan Am Railways, although I suspect Pan Am would resist, claiming passenger trains would interfere with freight operations. • Rail service between western CT and western MA should be considered via a collaboration between CT & MA rail companies. I know that an extension of NYP-ALB service to/from Pittsfield is being considered. However, this would not tap the western CT/MA markets as effectively as an extension of MTA Waterbury service.	Email to Makaela
02-10-20_2	John Pelletier		john.f.pelletier@gmail.com	My name is John Pelletier, my wife and I currently live in Newton, MA (Newtonville station) and own buildable property in Sunderland, MA. We plan to move there in the next 3-5 years. I am very much in favor of connecting the state better with rail. My wife and I don't own a personal vehicle and prefer to not fly. We frequently use the MBTA to get around Boston and to visit her family in Worcester. I frequently use the Downeaster to visit my family in NH and take vacation trips to Portland, ME. I usually take two or so round trips on the Lake Shore Limited a year, usually visiting Chicago or relatives out in Kansas City. It works fine but takes much longer than it should getting from Boston to Albany. New York has worked hard in the past few years to speed up service, upgrade rails/signals etc. on their part of the LSL line and the speed and ride quality has greatly improved that service but also the Empire service along this corridor. When looking at the 6 finalist options I think we need to be bold and look at a new separate corridor utilizing the I-90 ROW. It needs to be electrified and fast. However, reviewing projects in TX and CA show that this is 20+ years away if not more. In the meantime, I think option 3 is likely the most feasible per dollar spent (dollars unknown of course). This would critically create stops in Palmer, but also create the direct rail connection with Pittsfield and truly connect the state. Buses from Springfield to Pittsfield would be unlikely to serve choice riders and would do little to connect the whole state or improve access to Albany. Option 4 is very attractive as well and future electrification of this option could have significant trip time improvements due to the alignment's focus on higher speeds. But the time difference of 5-10min with existing diesel equipment is likely not worth the project cost. With careful design I think Option 3 could be implemented while not precluding smaller projects that would straighten out curves, improve signals, add passing track etc. to incrementally increase speeds and travel times to match Option 4. Again, done right planning/conduit work for electrification could be built in to make it easier and cheaper to electrify in the future. Especially as we think bigger about an I-90 alignment.	Email to Makaela
02-10-20_3	Andy Hogeland	Berkshire County Selectmen's Association	andyhogeland@gmail.com	SEE PDF OF Letter (opposing bus service, catchment areas)	Email to Makaela

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02-11-20_1	Rene Wood	Town of Sheffield Board of Selectmen	renecwood@aol.com	While the Town of Sheffield Board of Selectmen has stated our preferences for the East-West Passenger Rail options is a previous letter, I wish to offer my personal comments, as the session to be held today did not provide time for further comments from our full Board. Any option chosen will not satisfy all but to make this truly a viable East-West, as well as West-East, Passenger Rail line, the option selected must include rail service all the way through to Pittsfield and it must be a solution that can be implemented in a reasonable period of time, otherwise it will be useless. While I wish the State had the resources to invest \$23B needed to run it down the MassPike, I would rather a workable,viable, time-sensitive solution be selected than one that never gets decided or funded. I was surprised to note the reduction of greenhouse gases and taking cars off the highway system were not included or given more emphasis in this rail service discussion, given the legislature's and Governor's emphasis on greenhouse gases, carbon neutrality and climate change mitigation. These should be top priorities (benefits) in evaluating the options as well as guide the state's commitment to this rail line. The dollar costs of any service should factor in these significant cost reductions in green house gases and other state priorities. While such costs may be 'soft' cost, they are real and must be calculated. Also, many of us in Berkshire County would like to be more involved in governmental matters taking place in Boston, such as coming to hearings at the General Court or volunteering to be on committees at the Massachusetts Municipal Association. To do so now requires a trip of about 3 hours each way in horrible traffic plus parking fees. It it not a trip I take lightly. However, I as an elected Selectmen do feel disenfranchised from being able to exercise my full duties by being faced with such a time requirement to do my job as effectively as I would like. A train would allow me to make good use of my time while in route and avoid all the traffic. As one who regularly takes the 2 hour train trip to NYC from Wassaic and use to commute on Metro-North to NY from Old Greenwich for work, I favor traveling by train. This rail route would also connect the various parts of our state in a way that is severely missing and help to mitigate the extreme pressures on the cost of living, housing market, and even growth of Massachusetts population, as well as open up job and economic development opportunities for Western Mass, that is the area truly in the Western part of the state. There is no reason why some part of our state bureaucracy can not consider moving west into less expensive space and begin to decentralize functions now only in the Boston area.	Email to Makaela
02-12-20_1	Joseph Maspo			SEE PDF of letter submitted at 2/12/20 public meeting	Letter submitted at 2/12 public meeting
02-14-20_1	Maureen Doyle		doylemaureen3@gmail.com	Hi! I was unable to attend the recent meeting in Springfield but I want tpo express my "yes' vote in favor of this rail line! When you consider costs, please include all the savings due to less pollution for individual cars, which adds to air pollution and health issues (such as asthma). we need a rail line like this for the people! Look to Europe for a model is you need to. have a good day and weekend! peace, Maureen doyle 508-764-8042 (if you need it)	Email to Makaela
02-16-20_1	Adam Bindas		adamjbindas@gmail.com	I am emailing to express my disappointment regarding the recent study of East-West High Speed Rail in Massachusetts. The ridership numbers, costs, and general options all do not pass and prove to frustrate voters. As a resident myself, if high speed rail was built I would probably strongly consider moving out to western Massachusetts myself and commute in everyday. A properly built East-West rail would enable the entire state to benefit from the successes of Boston's current jobs boom, while enabling a larger array of housing options. Given the divisions we as a country face between urban and rural areas, this conversation is one about equity as much as it is about those with the environment, congestion, and competitiveness. I strongly hope you would consider amendments to the study which would properly take into account the demand, but also give options which enable faster rail connection west to connect the entire state into one community.	Email to Makaela

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02-17-20_1	Paul Opalinski		aaspmo@comcast.net	I believe none of the 6 alternatives reach High Speed Rail standards, therefore, ridership will never reach critical mass. Alternative 7 deserves to be addressed by DOT. Why was the big dig such a success, because it's underground. Support Alternative 7.	Email to Makaela
02-18-20_1	David Phillips		dphillips8_99@yahoo.com	I have reviewed the Fe. 6. presentation that was just posted. I do have comments on this as well. 1) The costs suggested in the exhibits for the high performance alternatives seem to be overstated. They can be reduced by carefully selecting the appropriate improvements. As MassDOT goes into the final evaluation of alternatives I think that it is time to mix/match parts of the different Alternatives. Improvements should be focused on east end where the most people would benefit (including Pittsfield riders). Each segment should be looked at separately: a) In the BOS-WOR segment there seems to be little reason to move to the Mass Pike alignment since that only shows a reduction from 48 to 44 minutes. This segment is, already publicly-owned and virtually passenger-only, so there is no need for separate track. The few at-grade highway crossings should all be separated. The proposed triple track section and other improvements in this segments would benefit all users and should not be “charged” to the East-West project. In the long run, a new, virtually straight alignment more parallel to Rt. 9 should be constructed from a point west of Westborough to Plantation Street in Worcester, including a new bridge over Lake Quinsigamond, saving several miles (again, benefitting Worcester, as well as points west). b) The WOR-SPG segment of the historic rail route is still owned by CSX and is largely single track. Separate passenger rail tracks should be constructed throughout this segment. The portion of the historic route from the west side of Worcester to a point east of Palmer (about 40 miles) is very circuitous and the new tracks should be built on a new alignment following the Mass Pike as far west as Rt. 148, but then cutting cross-country until re-joining the rail alignment east of Palmer, saving several miles of travel. From here until Springfield Union Station the historic alignment is very straight and, assuming at-grade roadway crossings are separated, speed could be very high. Improvements in this segment in Alt 3 & 5 would be essentially thrown away when a high speed WOR-Palmer alignment is, eventually, constructed. c) The fewest riders would benefit from improvements in the SPG-PIT segment so, perhaps, fewer improvements should be made, at, least, initially. Apparently, much of the historic second main track remains. Perhaps, restoring the missing portions would be adequate. 2) In light of the auto volumes (AADT) on the Mass Pike the ridership estimates seem low for the high performance alternatives, with frequent, fast service that would be very competitive. 3) This study should mention the potential for the BOS-Sturbridge portion of the proposed infrastructure to serve as a major part of a high-speed thru BOS-NYC route, a real alternative for the Shoreline (as identified as an Alternative in the NEC Future EIS). No solution to the problems of the Rhode Island-eastern Connecticut portion have been identified, as yet. Worcester would be a major beneficiary.	Email to Makaela
02-18-20_2	Richard and Beverly Prager		richprager1@gmail.com	Hello. My wife and I live in central MA, and have become aware of the study being made of rail travel from Boston to Pittsfield. We haven't been able to attend the meetings, though we have expressed our support for rail travel in the state in a meeting we had this winter with one of Rep. Neal's staffers, and also with Governor Baker. Thank you for all the work you and everyone associated with the study has done. We downloaded a presentation, and found it very informative. There is certainly a lot of information to evaluate, and it is challenging to weigh the relative strengths of a variety of factors. We are just writing to say that we think these to be the primary considerations: 1. Something concrete needs to come of this, not just wasted time and energy on another study. The result should be that there is more rail service across the Commonwealth. 2. Doing anything with mass transit will save all the carbon emissions from people driving their cars, yet it is important that the carbon emissions from mass transit also be kept to a minimum. This is crucial for the health of our planet. 3. Cost-efficiency is obviously very important. We want to be efficient, but we are definitely willing to pay more to support anything that will reduce our aggregate carbon footprint.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-24-20_1	Ben Hood	Western Mass Rail Coalition	palmertrain@gmail.com	SEE PDF of handout submitted at 2/24/20 Advisory Committee meeting	Handout at 2/24 Advisory Committee meeting
02-24-20_2	Dan Peacock	Rail Passenger Association and Trains In The Valley	dbpeacock45@gmail.com	SEE PRESENTATION PDF (comments on ridership estimates)	Email to DOT Planning
02-24-20_3	Jerry Smith Jr		treasurechestbysmith@gmail.com	My name is Jerry Smith Jr and I am 19 years old and started a business in Palmer MA due to the easy access from the East and West at exit 8. Also because most towns and city's off the mass pike do not have as much land for new growth as does Palmer and it's centrally located to towns and city's also north and south such as belchertown and Amherst and Hadley and Wales and brimfield etc etc. In meeting new customers the younger generation from Amherst and Hadley and surrounding areas have specified how they attend college her and do not have cars on campus and how hard to get to Boston for employment options or to visit family. Also retired couples that still have alot of life in them but hate the drive to Boston due to traffic and finding parking there that want to catch a show or need to go to state offices or just a big city get a way for the weekend and would so use train service if available because to get a ride to Springfield and back it hard to find or costly. Also so much development opportunities for business and would open up jobs and ways to get to and from said jobs. Palmer already has the history of the town of 7 rails so with what is already opened up for trains it would seem to be least expensive to renew instead of starting over elsewhere where there are no tracks already in place. That is just my observation and opinion. Thank you, Jerry Smith Jr sole proprietor of Treasure Chest Emporium 1422 N Main St, Palmer, MA 01069	Email to MassDOT Planning
02-25-20_1	Peter Rosengarten		pkraudits@gmail.com	Most of the conversation about the East-West Railroad focuses on the potential economic opportunities it would bring to western Massachusetts. What is not discussed as often is the positive impact the railroad would have on the handicap community west of Worcester.. My family and I have lived in the Pioneer Valley nearly twenty years. About five years ago I suffered a spine injury. To save time and spare you of the details, I am now disabled, walk with a cane and can no longer drive. This has been especially difficult for me as it has robbed me of my autonomy. I have access to the PVTa shuttles, but they only drive around locally in the Pioneer Valley. If I need to go to Worcester or Boston for a doctor's appointment, my wife or daughter have to take a day off work. Like many handicapped people, my ability to leave my home is predicated on the availability of other people. The East-West Railroad has tremendous support among the handicap community. Whether at physical therapy, church or sharing a PVTa van, the possibility of being able to take a train all the way to Boston is a constant source of conversation among those who have transportation challenges. My completely unscientific poll that has no actual physical data to support my findings, has the railroad with a positive margin of approximately 8 out of 10 people supporting it. The other two people had family in Albany and tend to travel there. It is unusual for any government project to have an eighty percent approval rating. Picture in your mind a person who has limited ability to travel, would now have access to most of the state. They can take a shuttle to the beautifully renovated Union Station, then the East-West Rail to Boston. There, they can use the T to get around the city. When done, take the train back to Union Station. As a handicapped person, I can tell you, this is a very exciting concept. I hope the above comments highlights the positive, personal side effects this project could have for one of our most vulnerable populations, Sometimes that human aspect can be lost among the economic babble and flow charts that are part of any massive proposal.	Email to Makaela
02-25-20_2	Marietta Rapetti Cawse		rapetticawse@gmail.com	SEE PDF OF LETTER (support for rail project to berskhires; meeting in Pittsfield)	Letter to Sen. Hinds & Ethan
02-25-20_3	John Haesy			SEE PDF OF HANDWRITTEN COMMENTS (impacts to freight rail)	Submitted to Makaela after 2/24 AC meeting

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-25-20_4	Geri Jennings		izbicki@gmail.com	I live in Southampton, MA and work for a company in Newton, MA. I am only required to come into the office twice a month because I have a 2 hour commute, and on days I come in I work a shorter day so I can leave and get home at a reasonable time. I explored taking public transportation to my office in the past, and learned that the best case scenario was that it would take me *FOUR HOURS* to travel to my office from western MA. At which point I'd basically have to turn around and start the four hour trip home. I would love to see better east/west transportation options, and I know of many others in the area who have worked out of the Boston area at current or in the past who feel the same. I'm excited to see this project continuing to be considered, and I hope it will eventually be completed	Email to DOT Planning
02-25-20_5	Tighe Dudeck		tighedudeck@gmail.com	I went to the public meeting 2 weeks ago in downtown Springfield about the project. I believe East-West rail it is worth any amount we have to pay, as long as it is built to be as fast as possible, with the shortest travel time between Springfield and Boston. I believe through the years more and more people will see Western-Mass as a viable option to live and commute into the city, as long as the travel time isn't too long.	Email to DOT Planning
02-25-20_6	Shawn L. Smith		shawnsmith22003@yahoo.com	In advance of the meeting tomorrow in Springfield I'd like to offer my take on the proposed options for the service . I like dreaming big . With that said I don't believe option 6 with its price tag and years of construction is the way to go . Incremental steps towards electrification and 150 mph speeds is more attainable . Let's get the trains running as soon as possible because we are already years behind on this . Once we can prove real life ridership goals then the case for massive infrastructure upgrades can be made. I fear that pushing for the most expensive options here will hold this projects progression . I was delighted to see at the meeting two weeks ago the support for connecting shuttle trains to Amherst via Palmer . Ultimately running direct trains from Amherst to Boston on weekends and during college breaks would be very successful. My thought on this would be to provide direct bus service between Amherst and Palmer Station to connect with East west rail Initially is the way to go . It's imperative that ridership estimates , especially when considering the Palmer stop in particular , span out beyond 20 miles. Including the Amherst area with its population of over 30,000 in this estimate is a necessary factor.	Email to DOT Planning
02-25-20_7	Nina Wolff Landau		nina.wolfflandau@gmail.com	I'm writing to share my support for Option 1 for the East-West Rail. I grew up in Amherst, MA and am now a college student in Rhode Island. The inability to get efficiently get from Boston to Western, MA and vice versa, especially without a car, is a huge hindrance for commuters and those traveling for other reasons, including myself when I travel from Boston. High speed electric rail is not only time efficient, but an important part of reducing air pollution and greenhouse gas emissions. To truly incentivize people to use trains, they need to be time efficient!	Email to DOT Planning
02-25-20_8	Kristine Gustafson		x5kitties@yahoo.com	This project is wonderful and I can't wait to use it! Please include a much needed connection in Palmer, Ma!	Email to DOT Planning
02-25-20_9	John Koski		jkoski12@hotmail.com	I would like to first confirm my support of East - West passenger rail service. I would like to see service that will provide convenient access to Logan airport, include scheduling that is convenient for getting to and from all of the Boston Professional Sports venues, as well as Museums and other top attractions inBoston, and last but not least, be capable of providing commuter service that will make Springfield a real alternative to living in Boston.	Email to DOT Planning
02-25-20_10	Gary Hart		gary_hart@sbcglobal.net	My preferred Alternative is #6. Other Alternatives are in decreasing order: #5 then #4.	Email to DOT Planning
02-25-20_11			carolineewilke@yahoo.com	My preferred Alternative is #6. Jobs with major corporations are dwindling in western mass and greater Hartford. If we'd like to continue to have higher-income year-round residents, we will need to create an easier way to commute to Boston.	Email to DOT Planning

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02-25-20_12	David Broer		dbroer@lincon.com	I'm writing to comment on the current East West Rail Study that the DOT is working on. One of the goals of the project is provide improved access between the western and eastern parts of the state and vice versa. If that's the goal, why are you limiting the study to linear rail options? This is an excellent opportunity for Massachusetts to invest in technologies that are the future of transportation and not something based on 1800s technology. I urge the DOT to look into technologies such as personal drones, projects like skyTran or any other non-linear transportation systems that are being developed. The DOT could work with MIT and/or WPI along with these emerging technologies and be a leader in future transportation systems. Either system I mentioned above could connect many cities and towns and do not limit you to a single path. There are others. Considering the temporal scope of the project and the dollars being considered, the state is at a juncture of where it can be a leader or follow the leader. The technologies can meet the stated goals and be done at a lower cost than rail. As a tax payer I hope you will consider alternatives and go with something beyond rail to move people.	Email to DOT Planning
02-25-20_13	Thomas Casartello, Jr.		tomcasartellojr@gmail.com	I am a resident of Western Massachusetts in the city of Holyoke and a supporter of the proposed East West rail service. I am a frequent user of all of the Amtrak rail services out of Springfield Union Station. I wanted to submit the following bullet points as comments for consideration: • Alternatives 3 and 4 seem like the most cost effective options and provide the “most bang for our buck.” While option 6 is ambitious, the large costs don't seem worth the extra minutes that would be gained. As is demonstrated in many intercity rail corridors, it is not necessary for the rail service to take less time than driving in ideal conditions at 1 AM. Rail services allow people to be productive when they would otherwise be driving and I think it would still be attractive to many users and it would certainly save time during rush hour commuting hours and busy weekend travel periods. Parking is a problem in the city - garages are expensive and street parking is limited. The train would eliminate that hassle. I think 4 would be considered the best option followed by 3 and a good third alternative would be a phased approach that spreads out improvements to the line over phases. An initial phase could perform upgrades to get the service going out to Springfield with limited round trips extending to Pittsfield. The areas where the double track is added in phase 1 could be constructed in a manner to allow the improved line to be upgraded to the standards described in alternative four in a later phase. This could be followed by a second phase that would extend full service to Pittsfield and improve the travel times between Springfield and Boston to what is described in alternative 4. I use the current Amtrak train to get to Boston now when I am going for an overnight trip and the Lake Shore's west bound departure time works for me, but if we had multiple round trips I'd take the train every time. • An infill station in the city of Westfield should be considered in addition to the proposed infill stations in Chester and Palmer and main stations in Pittsfield, Springfield, and Worcester. I am an employee at Westfield State University and can say that the University attracts many students from the Boston area as it is the most residential of the state colleges and the furthest from Boston. Many of our students travel weekly between Westfield and the eastern part of the state to return home and this could be a source of ridership. A stop in Westfield would contribute additional ridership to the service and make it more useful to more people. • Consideration should be given to operating one or two of the Pittsfield round trips west to Albany to connect to the Amtrak Empire corridor which could unlock some additional ridership potential. Consideration should also be given to extending some of the New Haven - Springfield Amtrak trains to Boston as some of our round trips as suggested in the NNEIRI study as this would attract additional ridership from the Hartford area. • Amtrak has proposed a new corridor development program to Congress as part of its FY2021 grant request and will also be pitching the same in its reauthorization request later this year. This program would involve a new grant as part of Amtrak's federal funding that it would use to help states establish new intercity corridor service. States would submit projects to Amtrak for consideration and Amtrak would provide grants from this account to help with startup costs for selected projects including capital costs as well as operational costs for the first year or two. State operational contributions would slowly phase in over the five year startup period in the proposed plan and reach the current PRIIA required percentage after the five year startup period. MassDOT should monitor this situation and consider submitting East west rail for consideration if Amtrak is successful in implementing this program.	Email to DOT Planning
02-25-20_14	Andy Koch		andrewjkoch@yahoo.com	Don't you think it would benefit more by adding the Rail line from Boston to New Bedford before undertaking the East-West project? I believe the economic benefits for the Southeast Coast line far, far exceed the East-West. And I live in Westfield.	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-26-20_1	Laura Clampitt		lauracclampitt@gmail.com	I heard about the public meeting on Monday in Springfield. Unfortunately, I doubt I'll be able to make a meeting in the middle of the day. Will there be future meetings planned to accommodate those who work during the day? I'm facing needing to move out of Western Mass due to lack of employment opportunities. If rail service to Boston was affordable and timely, it would open up a new job market for me. Additionally, I think Western Mass would really benefit from regional commuter rail at affordable prices for commuters from Springfield to Holyoke to Northampton to Greenfield. If it was affordable, I think many would use that service. The current problem is Amtrack ticket prices are too high for regular commuting. With lower prices and more frequent service, I think you'd see ridership soar. Also, many in Western Mass are very environmentally conscious. If rail service was structured in a way that one could get rid of their car, you'd have a huge marketing opportunity.	Email to DOT Planning
02-26-20_2	Jonathan Yourga		ultimatemechanic@comcast.net	Hello my name is Jonathan Yourga I would be in attendance of the scheduled meeting however I will be suck in my car commuting home from Worcester at the time of the meeting. For the last two years I commuted to Waltham every weekday of the school year. I spent four hours a day in the car, drove a thousand miles a week and put fuel in my car every day. I don't want to even think about what I payed for that fuel or the tolls! Fortunately I was able to find a teaching position a little closer in Worcester now I spend two hours and twenty minuets a day and purchase fuel every other day. I would ride the train if service existed I would be happy to pay and not mind the length of the ride with all the stops in-between this would allow me to maximize my time by completing grading, lesson planning, e mails, calls to parents, and possibly a little shut eye after a late night college class or parents night while on the train. This would give me more quality time at home with my family and prolong the life of my automobile. My 2004 Toyota currently has 296,000 miles! If I could ride the train I would replace it with an electric car. I am sure more people would do the same. However the east west rail must be in place. Once the rail is in place it will bring more riders as it will allow the state to be connected more efficiently. More riders will come as employees and employers see the employment distances expanded and housing distances will expand as well. Think of all the college students that would be able to ride anytime they wished to return home or the safety benefits of taking concert and sporting event participants off the road and on the rail. Let's face it the bussing that exists now doesn't cut it for my needs and many others yet the bus owners are having heavily and doing anything in their power to prevent this east west rail from happening as they have a monopoly on it right now. You must see the value and invest in the state as a whole knowing both the east and west will benefit from this investment in infrastructure that will only continue to grow the economy of the state. Hell cargo could be transported during none commuting hours as well if you design it right. Please do not kill this needed project.	Email to DOT Planning
02-26-20_3	Shelly K. Burelle		shoeturkey@me.com	I would like to show my support for the East/west rail!! I would love to be able to hop on a train to visit Boston for the arts, shopping or whatever!! Please make it happen!!	Email to DOT Planning
02-22-20_1	Gordon Swift	Goshen, MA	cookers@gmail.com	Dear Sirs, I strongly believe that making travel easier for east-west travel will benefit both Eastern AND Western Ma. Personally, I would spend more time in Boston if i did not have to drive to get there.	Email to Makaela Niles
02-22-20_2	Elizabeth Jahn Hart	Feeding Hills, MA	jahnhart@sbcglobal.net	My preferred Alternative is #6. Other Alternatives are in decreasing order: #5 then #4.	Email to Makaela Niles
02-22-20_3	Tim Schmoke		tschmoke@gmail.com	Hi, I just wanted to share my support for options 5 and 6 of the East-West rail alternatives. The primary reason I would take a train into Boston is if it was faster than driving, and it appears that options 5 and 6 are the only options where that is the case. Thank you for letting me share my thoughts. Regards, Tim	Email to DOT Planning

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02-21-20_1	Mathew Geffin		mgeffin@webberandgrinnell.com	Thank you for taking the time to listen to our comments. I sincerely hope we are able to figure out a way to get this done for the good of the commonwealth. By completing a East West rail line between our farhest most points of Pittsfield and Boston will only enhance our ability to grow economically. Imagine the possibilities if residents of this great state are able to choose to live in any part of this great state yet be only removed by 1-2 hours in either direction by high speed rail. It will bring more people because they will be able to afford more moderately priced housing in central and western mass yet work in Boston or any one of our major cities. Companies will be able to cast a wider net and have more moderately priced labor because they can choose from more job candidates. Companies will be able to collaborate even easier between our East and west talent and resources. Education will be linked and even New England as a whole will be an easier place to have self supported higher education, jobs and cities/towns. High speed rail is an essential next step in the growth of our great state. And quite frankly, if we could pull off the big dig and afford it then high speed rail is a NO BRAINER. I hope you get this done sooner rather than later for the good of us all.	Email to DOT Planning
02-21-20_2	Jack Straw		highlinebumps@gmail.com	Ethan, I support East/west rail. I drive to Boston regularly. Please spend the \$ and do the project correctly. Look at Boston tunnel. Cost overruns but consensus opinion is the cost is worth it. Thanks, Edward Steiger	Email to DOT Planning
02-22-20_4	Kevin Shea		kshea@smith.edu	Hello, I am a resident of Western Mass (Longmeadow) and I would prefer option #6. My second and third choice options are #5 and #4, respectively. Thank you. Kevin Shea 64 Warwick St. Longmeadow, MA	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-26-20_4	Laurie Ball		beachgirl2u@hotmail.com	I am writing to overwhelmingly support the extension of the Commuter Rail to Western Massachusetts and establish a stop in Palmer. We desperately need the connection to Boston for many reasons: Ø Access to opportunities that Boston offers that are not and likely will never be available out here (Jobs, Colleges, etc.) Ø Access to world class healthcare, too many of our citizens have to now travel to Boston via the Pike (aka Parking lot) Ø Access to social and cultural events and activities Right now, we are forced to either spend hours in our cars crawling along the MA Pike...NOT good for the environment. The Pike is constantly overwhelmed with an excessive number of drivers, the road is constantly requiring repair due to excessive use and it is a gross waste of tax dollars. Let's get the train out here and get more cars off the roads. I personally am a huge fan of the rail. I live in Scituate (Greenbush line) up until 8 years ago. While I love the tranquility of Palmer, I miss having the option to jump on the train and go to Boston. My family still lives in Scituate, in order for me to visit – I refuse to drive the Pike anymore – I either take the Amtrak once daily train from Springfield to South Station and then Commuter Rail to Scituate or I drive to Worcester and take the Commuter Rail to South Station/Greenbush. I am personally witnessed the growth and revitalization the restoration of the Greenbush and Middleboro, etc., lines have net on the South Shore. The housing prices have sky rocketed and housing supply is very low. Comparatively, we have a surplus of land and housing in Western MA and the prices are below market. Open the rail and leverage our housing surplus for all the people in the Greater Boston area that cannot afford quality housing. Finally, the Peter Pan bus is not an option. It is no better than driving myself, I have taken it once, it is inconvenient and pricey. I understand the state is subsidizing the fares....just lining private business pockets given the very limited service. No money should be going to a private entity to provide the transportation services the state needs to step up and get this resolved once and for all. Palmer is the gateway to Western MA. We are the Hub for students traveling to the largest University in our state! The surrounding towns would equally benefit from a stop here, it makes perfect sense and could easily be built to mimic any of the stops along the Greenbush or Worcester lines...no fancy stations needed. Just a Commuter Lot and a Station Stop. As you may have guessed by now, I am rabid for this cause. I cannot stress enough how important this is to all of us in this area. We need transportation and we need it now.	Email to DOT Planning
02-26-20_5	Shelly Brown		mrs_shelly_brown@yahoo.com	I would like to see a stop in Palmer, MA.	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-26-20_6	Jules Wang		julianwang4@gmail.com	My comment on E-W rail is that I'd love to be able to live in western Mass in order to financially sustain living in the state I was born and raise in, one that I love. I also want to contribute to the equity and growth of what's been long described as the "forgotten half" of the state. But I also want to visit my friends and family on the South Shore and keep in touch with my long-established connections in Boston. As it is, I don't own a car and would continue to not want to do so for the sake of my own safety, so I'd be relying on mass transit options which are already less than robust with the RTAs in the west (being BRTA, PVRTA, and FRTA). And as it stands, coach buses are pretty much the only option, vulnerable to traffic and demand-based pricing and are in dire need of competition. That's why I'm advocating for the full electrification option for E-W. Travel times would be reduced, increased capacity would allow the state to run a regular schedule instead of Amtrak's once-daily Lake Shore Limited train, and it would stimulate overall development across the Pioneer Valley and the Berkshires. However, most importantly, I believe that such a project would get significant federal funding if the state coordinated the project with the state of Connecticut and Amtrak to build a backup route to the current Northeast Corridor - sections of shoreline trackage are in need of major repairs and climate-proofing, marking the need to develop a resilient inland route through Hartford, Springfield, and Worcester for Regional and Acela trains. Without it, the federal government risks a major decline in revenue should the Boston-to-Washington link be compromised. Please reflect the impacted constituency's desire in your continuation of the study and work on providing a full benefits assessment with revised statistical estimates for the electrification option.	Email to DOT Planning
02-26-20_7	Benjamin J. Turon	Empire State Passenger Association	bjturon@gmail.com	SEE PDF (include Albany in study)	Email to DOT Planning
02-26-20_8	Mark Bibace		mbibace@gmail.com	I think there needs to be a way to gauge voter approval for this project, before going further. There should be a ballot question on this project. To me it appears to be a huge boondoggle initiated by politicians looking for something to do. How many people in their right mind will travel daily two hours from Springfield to Boston ONE WAY? Are these people serious? I understand Western Mass does not get their fair share of transportation dollars. And they should certainly get funds. But this is a HUGE WASTE OF MONEY, and I hope sane minds will intervene.	Email to DOT Planning
02-26-20_9	Jay Rossner		rossner_j@hotmail.com	Although those of us living in The Commonwealth of Western Mass feel that this service would be a great and wonderful thing, Charlie Baker has said he would veto any plan put on his desk. The thing is, if every single citizen living outside of route 128 voted against his next run for office, he'd still win, and knows it, he'd much rather give 25 billion to the poorly managed MBTA, after all, out here we ride horses.	Email to DOT Planning
02-26-20_10	Walt Grohs		wag928s@gmx.com	Once again, were going down this pipe dream in this state. There would only be a few hundred people, if that going to / from Bean Town daily from W. Mass., let alone Adams??? This state threw the people of Adams to the dog's. It is an economic disaster and YOU know it! It is totally insane to spend this amount of our tax money to do this, for so few people to use it. Little has been said on exactly where all this money would come from too. What? Raise more tax's? Raise the gas tax to pay for it? Sorry. This is a liberal tax & spend fraud scheme by the liberals in Bean Town. If you liberals in Bean Town, really wanted to do something worthwhile, why don't you improve the rail freight service instead? Add in some spurs here and there to off load, load freight cars more easily in more towns. This would take a lot of tractor trailers off the roads. Of course, YOU will not be able to gouge the freight companies as you would us, the "General Public" with your BS.... well.. maybe some you would, there are a lot of dumb people in this state	Email to DOT Planning
02-27-20_1	Casimir Krol		cashil55@hotmail.com	Scrap the whole idea unless it can be proven that the economic benefit far exceeds the cost. Too often citizens tax monies are spent without politicians not having done a thorough due diligence study.	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-22-20_4	AP Buckner		apbuck@me.com	Ethan, Thank you & the team for all your hard work on this. Here are the reasons why I support the most expensive, aggressive option that includes Pittsfield and keeps the travel times at the fastest possible level: • I worked in workforce development for low income youth for the Job Corps program in Western MA. Transportation was an enormous barrier for students and graduates as it related to housing, access to social services and commuting to employment and apprenticeships. The students came from all over the Northeast and throughout the Commonwealth of MA. I met with dozens of employers including some in Pittsfield who were unable to find qualified applicants. This system would likely spill over to influence other transportation upgrades from the commuter rail to other destinations due to increased demand. People would be earning more and would be able to use zip cars, shuttles, Lyft, etc. • I am grossly under-employed here, having moved to the area 11 years ago. I am also physically limited by medical issues. At the age of 59, I cannot yet retire for a good decade. I formerly was self employed as a contract consultant earning from 90 to 200 per hour depending on the contract. I might be able to do that work again if the rail allowed me to reach more customers without the exhaustion of driving myself. The Pioneer Valley has MANY under employed people. I am sure I am not alone. • It is the right thing to do, for the environment. This variable cannot be underestimated. This alone is enough reason to make these changes. • As expensive as it is, if we can find a way to swing it, the economic benefits should be huge. The impact on Springfield as a desirable place to live and recreate, and the linkages between Springfield Pittsfield and Boston would be significant. • I am an Air B&B host in Amherst, have hosted business people, tourists and graduate students/researchers for 10 years. They are VERY FRUSTRATED coming from other global locations by our backward situation with transport. They are eager to go to Boston, NYC, the Berkshires, Springfield, Washington DC. • I have aging parents in the Metro Boston area aged 87 and 94. I would visit them more often if I didn't have to drive my car, as bad weather or night driving are harder and harder for me. I am sure there are many other aging X'rs and Baby Boomers who also would see more of family and friends, and go to Boston for performances, museums, sporting events etc more frequently were these trains running. Respectfully Submitted, AP Buckner, MHROD Amherst Massachusetts	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-22-20_6	Matt Blumenfeld	335 Middle Street Amherst, MA 01002	matthew@finacialdevelopmentagency.com	Dear Mr. Britland: As a twenty five year resident of Amherst and the owner of a small business, I am writing to express my full support for an East West rail solution that would enable Boston to Springfield to Pittsfield travel on a part with rail solutions in other advanced industrial countries. Let's be bold, and create real high speed rail that would tie our Commonwealth together and spark long term economic development. In case after case around the world, high speed rail has made a huge positive impact on the communities it serves, so why shouldn't Massachusetts, the most technology advanced state in the union by many measures, lead our nation in this realm. Investing in this kind of infrastructure will increase mobility, relieve congestion in the Boston metro area, and increase economic and residential development far into the future. I strongly urge our state leaders to make the boldest investment possible as they consider the various options in the table for East West rail. Sincerely, Matt Blumenfeld 335 Middle Street Amherst, MA 01002	Email to DOT Planning
02-22-20_5	Elisabeth Castillo	20 Glenwood Ave Northampton, MA 01060	lisaca73@gmail.com	Greetings. I am writing in support of improving rail service to Western Mass. I live in Northampton, and while we have a train station, the only service is to South, to NYC or North to Vermont with only one train per day in each direction. I would love to see service from Northampton to Boston; or even from Springfield to Boston. When I lived near Ayer a few years ago, I occasionally took the commuter rail (Fitchburg Line) to Cambridge and Waltham, but was extremely disappointed that it was actually cheaper to drive my car! This is a tragedy. I love trains, and am comforted to use them knowing it is much more energy-efficient than car or bus travel - so I hope to see service to my area of Massachusetts! Thank you Elisabeth Castillo 20 Glenwood Ave Northampton, MA 01060 508 3295 2238	Email to DOT Planning
02-22-20_6	Brandon Matulewski		usaskiteam993@aol.com	Hello to whom this may concern I am worried that the infrastructure you plan on building does not cover all of Western mass and only covers the furthest eastern extremes of the counties this line needs to travel at a minimum into the city of Westfield to cover all the folks that live in the hill towns please don't spend my tax dollars unless you are going to cover out to at least westfield Thank you Brandon Matulewski	Email to DOT Planning
02-23-20_1	Jo Fr		jaff@meganet.com	If Palmer ma became a train stop where would a train station be in Palmer and why put one in Palmer	Email to DOT Planning

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02-7-20_3	Lauren Miller		lonewolfette9847@live.com	Greetings, I viewed a PBS NewsHour video on YouTube concerning Texas light rail systems. I believe there is a lot of plausible information. https://youtu.be/jR2Afhd6gWY	Email to DOT Planning
02-24-20_1	Joshua Gordon		joshcello@me.com	To all working on the East West rail study and Worcester Union Station's new platform project, Thank you for all the effort you are putting into this study on a great project! Of the East West alternatives being presented today, I'd vote for either alternative number 4 or 6, but they should both have Albany NY as their destination, not just Pittsfield which can still be a stop. Albany would represent a bigger travel market as well as being an Amtrak hub. I realize in our political climate that alternative 6 is less likely given the high cost of a new line along the Massachusetts Turnpike, but having ridden Italy's high speed rail on a quick trip from Rome to Naples watching my drink stay smooth at over 180 mph, I think just as the Massachusetts Turnpike set an example for the country to create and fund the interstate highway system, so would a dedicated high speed rail line set an example for our country to expand such a network at a time when increasing air and road travel will only make global warming worse. Maybe a new line could be built to 220mph bullet train standards of curvature but initially without electrification using high speed diesel trains, then they could be sold when funding is in place for electrification. On the other hand, an electrified line at higher speeds could handle steeper grades better. I would love to be able to travel south and west from Worcester by high speed intercity rail, whether for business or to visit family in NYC and NJ, rather than drive first to Providence or all the way. I think Worcester would get a tremendous economic boost with the convenience of expanding intercity rail even at 90 or 110 mph, as would the rest of Massachusetts. Maybe higher frequency would be more valuable than ultra high speed, as Canada is proposing with its Quebec-Windsor corridor. Another concern: the plan to add an island platform at Worcester's Union Station (https://www.mbtta.com/projects/worcester-union-station-improvements) only allows one additional train to be platformed (the track closest to the station already has a platform and a train would be boardable on both sides with the new island platform). Originally the station had 3 tracks that could board trains on that side (see pics), and if Worcester is to be both a commuter rail and future intercity Amtrak hub, 3 tracks seems like the minimum given that one would be needed as a terminal track for commuter rail trains to be turned around. In comparison, Providence RI station has two island platforms and can platform 4 trains, allowing express intercity trains to pass commuter rail. One last thought: there is a never completed but graded rail right of way paralleling route 20 between Palmer and Sturbridge MA; have you considered it at as a possible route? https://en.m.wikipedia.org/wiki/Southern_New_England_Railway All the best, Joshua Gordon	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-28-20_1	Joshua Gordon		joshcello@me.com	Dear Makaela, Thanks for your reply. One other thought: MassDOT just announced it will be replacing bridges on the Mass Pike (https://www.telegram.com/news/20200227/8-massachusetts-turnpike-bridges-in-westboro-southboro-to-be-replaced-next-summer). Wouldn't it make sense to design the replacement bridges to have the capability of adding high speed rail as an option, by at least having long enough or wide enough spans to accommodate a rail right of way? In Florida, a new interchange (Route 528 and Innovation Way) east of Orlando International Airport was built with extra overpasses to accommodate a future new rail line right of way running south of and parallel to 528; the rail line is now being built by Virgin Trains USA and will extend their Brightline service from West Palm Beach to Orlando. Pic attached. https://www.tcpalm.com/story/news/local/shaping-our-future/all-aboard-florida/2019/12/17/virgin-trains-talks-disney-build-station-resort/2678091001/ All the best, Josh	Response to Makaela Niles based off previous email
02-26-20_11	Todd Steglinski		wsgsd@comcast.net	Mr Britland, I obtained the e-mail I'm using to contact you via MassLive. A few questions. What's the anticipated speed of the trains? Is it likely the rail project will become a reality and if so how far out until ground breaking? Is there a map where I can zoom in Google map style to see the exact route through West Springfield? All I find online is broad, zoomed-out maps. I'd like to zoom in close. How would the state acquire land through municipalities and what would the size / width the state would need? i.e. a 50 foot swath for two sets of tracks. One in each direction. Eminent domain etc.. or if land has a conservation restriction and it falls within the path of the rail project, how does that impact land acquisition and land value payment? Is there an e-mail list or website for public meetings? I found out at the most recent Feb 24th meeting at Sheraton after the fact. Thank you. Todd Steglinski, West Springfield	Email to DOT Planning
02-28-20_1	Lucia		luciafoley@yahoo.com	SEE PDF OF COMMENT LETTER	Email to Makaela Niles

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-22-20_10	Matthew Glennon		mattglennon@gmail.com	Hello, My name is Matt Glennon. I am a strong supporter of high-speed rail. As many Massachusetts residents, I am also highly concerned with air pollution and climate change. When not teaching, I travel all over the USA and internationally. When I travel, I see the regions that invest in mass transit tend to thrive long term. Businesses want to locate there, new businesses open around these train stops, and you see a rebirth of economic activity and opportunity! Traffic congestion lessens, and young people want to move there! Look at any stat on the younger, college-educated segment - many don't want to own cars right out of college. Not having high-speed options in the western part of Massachusetts continues to stunt growth in this area as both young professionals and businesses avoid our area in favor of more vibrant "connected" areas of the country. In places I travel that haven't made those investments - you see exactly what we are starting to see in Massachusetts including: traffic, pollution, sky-high real estate prices in the city centers/surrounding areas, and economic stagnation as you get further outside the metropolitan area. Look no further than the number of residents leaving New England each year as evidence. The last item I would point in support of the East/West rail project is residents of Western Mass are about to get a decent rail option - but not to Boston but rather CT and NYC. Failure to take action on East/West rail in our state will inevitably cause Western Mass money flow from Boston area to CT/NYC. Building a high-speed east/west railway will unify the state and increase economic opportunities for all. \Please don't settle for mediocre rail solutions. Build a rail system that gets you faster from point A to point B than traveling by car, and the people will take it in droves. I suggest the state pay for the rail tracks - build the rails tracks with concrete ties for high-speed railways. Then allow high-speed companies to bid on providing rail service (bid on routes) - they have no cost for the rail or ongoing maintenance. Five-year contracts with fixed fares with the cost of electricity being only variable to raise/lower fares during this contract period. Private sector, free market principles with government support - perfect mix for rail! If required, the state and federal government should subsidize passenger tickets as needed during the first five years which would allow the rail provider to ramp up service. Please do not settle for substandard rail systems - New Englanders sets the standard in the world in so many impoprtant areas, including: Healthcare, Entrepreneurship, Education, and too many to list here. Let's stop the "noise" around mass transit and do what we all know is the right thing to do for citizens of this state. Best, Matt Glennon Amherst, MA	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-22-20_7	Martin Newman		martynewman413@gmail.com	I agree with those who are saying that the state study greatly underestimated the potential ridership on proposed east-west rail. Connecticut has done what Mass. has not: successfully expanded service to Springfield. The ridership on their "Hartford Line" has dramatically increased year-to-year, and has helped spur apartment construction in downtown Springfield. Even at the circa 1870 speeds that the single daily Amtrak train travels, east-west ridership would be substantial. It is nearly impossible to get to Boston from the Springfield area on the chronically congested Mass. Pike without traffic delays. A Stop at Palmer would spur development being only 65 miles from route 95. A stop at Westfield would pick up lots of student traffic. Residents of Western Mass. have been paying for Boston area transit projects for decades. There is no excuse for the lack of usable, inexpensive rail service to the east. It doesn't even have to be lightning fast. Martin Newman - Westfield	Email to DOT Planning
02-22-20_12	Frederico Fernandes		fredericosilvafernandes@gmail.com	Mr. Britland, Thank you for taking the time to hear public commentary on the east-west rail project. My take on it, is it is a worthwhile endeavor if done correctly. Meaning, high-speed rail connecting Springfield and Boston directly with as few stops along the way as possible, ideally none. In my opinion, surrounding communities can make the trip to Springfield to catch the rail service. It's convenient enough for all. A points west connecting line could always be added in the future if there was enough demand. As stops are added, travel time increases and fewer people make the choice to ride rather than drive. That would be disastrous for the project. Keep it simple, make it fast, and it's worth the investment. Best regards, Frederico Fernandes Holyoke, MA	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-22-20_13	Claudia Palframan		cchpalframan@gmail.com	Hello, I am writing in support of extending rail service to Western Mass. I spent much of my life in eastern Massachusetts, and used the commuter rail and MBTA frequently, for school, work and personal use. Moving to Western Mass was a bit of a culture shock. I could no longer hop on a train, relax, and then enjoy my day. Driving into Boston became a dreaded chore (I had family living in Allston, and visited frequently). I tried the bus, but it takes the same roads as I did - and runs into the same traffic. While I know from many years of experience rail has it's issues, it's still a very convenient way to travel. If I had access to rail into Boston (or Providence) I would, based on my interests and family and friends in the eastern Mass area, probably travel by rail about once a month. When I retire, it will be more frequent. I also feel that it would be an economic help to have better rail access in Western Mass. Many of my younger friends and acquaintances are looking for affordable places to live, and enjoy Western Mass (good theater, music, food, hiking, museums, etc) but do not want to still have a long commute by car (in eastern Mass - most commutes by car are long), but have said they would sit on a train, read a book, relax, or get a jump of the day remotely. Rail would also reduce some of the congestion on the Mass Pike. It would help the economic situation in Western Mass, and it would make Massachusetts more friendly to tourists. By the way, I capitalized Western Mass because it does feel like a different sate than eastern Mass. Thank you, Claudia Palframan Chicopee, MA	Email to DOT Planning
02-29-20_1	Dan Peacock		dbpeacock45@gmail.com	Ethan Britland, East-West Project Manager. My attached, 2-29-2020, Revised Response to MassDOT's 2-6-2020 Presentation of the East-West Corridor shows that, according to my "Peacock Analysis", "MassDOT's Analysis" Vastly Underestimates Potential East-West Ridership 7.7 to 11.9 Times for Option 3 and 2.8 to 8.4 Times for Option 6. If you have any questions about my ridership analyses, please contact me. Please acknowledge receipt of this E-Mail. Sincerely, Dan Peacock, Member Rail Passengers Association and Trains In The Valley Daniel Peacock 28 Hayward Drive Surry, NH 03431	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
2-28-20_3	Dave Golden		davegolden1@comcast.net	Good afternoon. I am writing with my thoughts on the alternatives for a proposed east-west rail line. I live in Palmer. First, I do believe there is a need for this service for multiple reasons including giving options to people looking for more cost effective housing and having easy access to the Boston area, allowing for economic growth in the areas where a stop would be located and opening up tourism to not only the western MA area, but Boston without having the cost and search of parking. There are other reasons as well, but I believe these are first and foremost. As to the alternatives, I feel we should start with the most economic choice and it would seem to me that by utilizing, if possible, existing CSX lines would not only be cost effective but would probably offer a faster solution. I think there should be a stop here in Palmer, at the existing station/restaurant, due to the history that this town has with rail ridership and once again, probably offering the easiest, quickest and most cost effective solution. I believe also that by starting with a bus from Pittsfield to Springfield and then a stop in Palmer continuing on to Worcester and then using the MBTA lines, would serve as the test for future needs as at this point in my estimation, the cost/benefit of adding a train from Pittsfield isn't warranted due to the populations of those communities. Thank you for looking at the publics thoughts and ideas! It can only help. Dave Golden	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-28-20_3	Noah Pott		npott@bates.edu	Dear Mr. Britland, Below is my public comment regarding the East-West Passenger Rail Study My name is Noah Pott, and I am a volunteer for the Train Campaign (www.traincampaign.org) and a student at Bates College studying Urban Planning and Transportation. When narrowing down the six alternatives for East-West passenger service, serious consideration should be given to Option 6: a completely new electrified high-speed rail line, similar to those found around the world in Europe and Asia. When studying options, ridership is probably the most important factor. And the ridership depends completely on efficiency, reliability, sustainability, frequency, and cost. High-speed rail can deliver on all of those fronts. High-speed rail is the fastest and most time-efficient option. If people can hop on a train in Pittsfield and be in downtown Boston faster than they can drive, that will instantly become the preferred option. As seen around the world, high-speed trains are extremely reliable and run at very high frequencies. It is also the most sustainable form of transportation, surpassing all diesel-powered trains, and can run on 100% renewable energy. Given the zero dollars spent on diesel fuel, and the extremely low cost of maintenance for electric locomotives, passenger ticket costs can remain low and affordable for everyone, boosting ridership even further. Electrified trains also don't contribute to air pollution in dense urban areas and rural towns. The high-speed rail option is also the most expensive, however the economic return will be equally sizable, especially when integrated into a future network of high-speed rail across the country. The higher ridership will also save hundreds millions of dollars of economic output lost by sitting in traffic, as well as play an integral role in combating climate change. Lower traffic congestion alleviates a constant need for frequent road repairs, saving money. Another thing to consider is the cost of doing nothing, or only doing "as much as necessary." Looking through the preliminary study, Option 6 outlines how the tracks would follow I-90 until reaching Lee, where it would connect to the Housatonic Railroad ROW all the way north to Pittsfield. This is slightly concerning for two reasons. First of all, the Housatonic ROW is very narrow and winding, which is hardly conducive to speeds greater than 59 mph (as stated by the 2014 Station Location & Design Analysis Study, Berkshire Regional Planning Commission). Secondly, using the Housatonic ROW would turn Pittsfield into an end station, as the ROW from Lee to Pittsfield comes into the Pittsfield station from the west. This would make the high-speed rail line harder to integrate into the future rail network. For example, on an express high speed train from Chicago to Boston, trains would still have to stop in Pittsfield to change directions, greatly reducing the time efficiency and extending travel times. A much better solution to both of these problems would be to follow I-90 until it crosses the CSX line West of Springfield, and then join the CSX ROW, either upgrading the current tracks for HSR speeds, or building new tracks next to the existing ones, straightening out curves in the ROW at the same time. We also need a high-speed line across the state now. If the building of an entire new ROW for a high speed line becomes too expensive or takes too long, and Option 6 is rejected as a possibility, we should focus on bringing up the speeds of the existing line as high as possible, preferably over 125mph—the higher the speeds, the higher the ridership and economic benefits. This should be done by straightening the current ROW and electrifying the line. A recent study for East-West rail recently came out with much lower projected ridership numbers and higher cost than originally projected. However, I believe that those numbers fail to take into account the ridership numbers when seamlessly integrated into a vast transportation network across the state, as well as access from trains coming from Albany and Chicago. It is also worth noting that new lines in Connecticut and Springfield extending north/south have also greatly exceeded projected ridership numbers. Through my work at the Train Campaign, I've spoken to many people about the possibility of having high-speed rail service across the state, almost everyone in enthusiastic and unanimous agreement — "high speed rail is an absolute must!" — "HSR is a long overdue overhaul of our transportation infrastructure." The State of Massachusetts has a huge opportunity to lead the world in a 21st Century transportation solution. Now is the chance to take that opportunity to the tracks. Thank you for reading my comment, Noah Pott of Great Barrington, MA	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-02-20_1	Peter Deluce		outlook_91FFF1CE60098235@outlook.com	GREETINGS,I, HAVE SUBMITTED TO THREE GROUPS MY RAIL PLAN AND HOW TO PAY FOR A PORTION OF IT.TO MY KNOWLEDGE NO RESPONSE. SO IN SUMMARY,HERE IT IS AGAIN. 1. NEW SEAMLESS RAIL (SINGLE TRACK) BUILT INTO/ONTO EXISTING MASS PIKE RIGHT OF WAY.CONNECTING TO CITIES VIA HIGHWAY FEEDERS ,SUCH AS I-291,1-290. OTHER CONNECTORS TO 1-84 INTER CHANGE & SHOPPERS WORLD.RT.9 PLAZA. 2. HIGH SPEED RAIL- WILL BE ACCOMPLISHED, BY STATION STOPS,ACTING AS POSITIVE CONTROL POINTS.ALLOWING A TRAIN TO PROCEED ONLY AFTER ONE HAS ARRIVED,FROM OPPOSITE DIRECTION. 3. THE POWER SOURCE WILL BE ELECTRIC, WITH A BRAND NEW SUBSTATION(S) BUILT GENERATING POWER AS NEEDED,THEN SELLING THAT POWER BACK TO COMPANIES WHEN NOT NEEDED. 4. THE RAIL LINE WILL COVERED BY A CANOPY.INSIDE WILL BE THE POWER LINES.THIS CANOPY WILL HAVE A 2-3 INCH SPACE FROM A TRAIN WELL AND WEATHER PROTECTION VIA NYLON BRUSHES ALLOWING FOR AIR EXCHANGE. 5. A MASTER ARCHTEXICUAL FIRM WILL DRAW UP MODULAR PLANS.SO EVERY SECTION WILL ALLOW LOCAL BUILDERS/CONTRACTERS TO PARTICIPATE. 6. RESPECTFULLY SUBMITTED , PETER C. DELUCE, SPRINGFIELD,MASS.	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-27-20_2	Laura Sylvester, Ben Hood, Sherry Morgan, Kit Sang Boos	Western MA Transportation Advocacy Network	lauras@foodbankwma.org	The Western MA Transportation Advocacy Network supports immediate development and implementation of east-west passenger rail service between Pittsfield, Springfield, Worcester, and Boston. We feel that – • Communities across Western Massachusetts would benefit from investment in our transportation infrastructure, and related transit-oriented development; • Better transportation options would help residents reach hospitals and health care, mental health and addiction services, and social services agencies assisting with food insecurity and homelessness; • East-west travel is heavily dependent on the increasingly congested Mass Pike. Transportation is responsible for more than 40% of greenhouse gas emissions in Massachusetts. Whether using existing or new rights-of-way, trains would be significantly better for the environment; • The climate change crisis mandates that Massachusetts invest in better public transportation to reduce greenhouse gas emissions, improve health of residents and allow us to meet the requirements of the Global Warming Solutions Act; • Buses and vans connecting rural towns to trains would allow access to job training and educational opportunities in nearby cities and towns; • Train service spanning the Commonwealth would address regional inequity between east and west, urban and rural; • People who work in eastern Massachusetts would ride a commuter train home to places west of Boston where housing is affordable and lifestyles are less stressful. Political and business leaders from Boston, Springfield, Central Mass, the Pioneer Valley, and the Berkshires are strongly in favor of east-west passenger rail across Massachusetts. In a letter to the Boston Globe, Roger Crandall, MassMutual CEO, said, “With headquarters in Springfield and a growing presence in Boston, we see firsthand how both sides of the state can benefit from a stronger connection with each other. However, like so many others, we also face the gridlock that prevents all residents from traveling easily between both ends of the Commonwealth. East-west rail would be a true game changer. It’s time to stop thinking about if we can do this and instead talk about how we are going to do it.” On February 21, 2020, the Boston Globe Editorial Board endorsed the east-west rail project noting that western Massachusetts has not been “getting a fair shake when it comes to transportation spending.” The Globe’s editorial board wrote that the value of the east-west rail project could attract federal funds for the project. We are concerned that MassDOT’s consultants have dramatically underestimated ridership in the East-West Passenger Rail Study of service between Boston and Pittsfield when compared to projections made by the 2016 Northern New England Intercity Rail Initiative (NNEIRI). At the presentation on February 6, 2020 in Springfield, the consultants estimated a ridership of 247,700 on a 150 MPH service that would cost \$25 billion. By contrast the NNEIRI study of service between Boston, Springfield, and New Haven forecast 429,665 annual boardings at stations between Boston and Springfield on a 90 MPH service costing \$685-855 million. Even adjusted for inflation to 2020 dollars, the cost to implement this top-level NNEIRI service would have been more affordable and achievable by comparison with all the service levels being considered in the current study. We strongly urge MassDOT to reconsider its ridership projections, including calculation of induced demand, and careful consideration of more robust forecasts in the NNEIRI study. We also encourage development of final alternatives which are appropriate in scale to the need to connect all parts of our Commonwealth as soon as possible with passenger rail service. Laura Sylvester Ben Hood Sherry Morgan Kit Sang Boos On behalf of the Western MA Transportation Advocacy Network	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-15-20_1	Frances Cress		mfcress@comcast.net	To Whom It May Concern, The inequity in financial support from the state between suburban communities that provide the lion's share of support to their school systems and the state aid given to poorer, non-performing communities is dramatic. The eventual degradation of school performance in these suburban districts is inevitable if we can not achieve a more equitable sharing of Chapter 70 funds AND if changes are not made to Proposition 21/2 which limits our ability to levy taxes locally. In Longmeadow, MA there has been little increase in housing values since the recession of 2008. As a consequence, the prospect of continuing to meet Proposition 21/2 requirements to increase our tax base in support of education and other needs is nil and will soon become an impediment to maintaining quality education. There is a solution for Longmeadow and other communities in the Western part of the state who are in need of revenue generation for varying reasons; the EW passenger Rail. EW Rail service will certainly contribute to growth in valuations in the Western MA real estate market and to stronger economies among the towns along it's corridor. The influx of new people and new money always achieves that. At present the ability of Boston's needed labor force to find affordable housing within the Boston metropolitan area is greatly strained due to a continuing meteoric rise in these costs. To that we add the existing infrastructure's (Mass Pike) declining ability to carry the increased traffic volume it has witnessed in the last 20+ years and the resultant increase in commuting times to Boston which are now at unacceptable levels. The rail option is truly the only viable economic decision that is also environmentally friendly. The current EW Passenger Rail models fail to appropriately address predicted ridership and should not be used to make decisions about the efficacy of the concept. A dynamic model that considers induced ridership as a result of a new EW rail is necessary. A load of only 10-15% on "existing" ridership figures is ludicrous especially when we know the "actual" increased ridership figures for the Downeaster line are at 53%. Which, by the way, blows the usual induced ridership percentage used in Europe of 35% completely out of the water. If the Downeaster figures aren't sufficient indication of pent-up demand, I don't know what is. The current EW Rail model regarding ridership is nonsense. High speed rail service west to east and vice versa is needed to assist the economies in the Western part of the state expand while providing support to sustain the boom in Boston business. It is an environmentally sound way to provide access to lower priced housing markets for the employees needed to fuel that boom. The current cost of housing in Boston metro area exceeds what a large portion of the labor market can bear and it reduces the quality of life for those who are forced to make it work at a risk to the businesses that employ them. The reduction in automobile use and associated delays in transport time, overcrowding and congestion in route to Boston and within the city limits will be greatly mitigated. Consider the impact of the reworking the Alston interchange alone! EW Rail is a "must do" for this state to retain its position with industry and as #1 in the nation for its schools. If the study also fails to evaluate the income generated from "induced ridership numbers" the evaluation of it's efficacy in relation to construction costs is faulty too. I see no detail in the current study that supports this more reasoned, rational approach either. Fran Cress Longmeadow MA	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
02-29-20_2	Rob Kusner		profkusner@gmail.com	Dear colleagues: As I mentioned in my comments at the public meeting in Springfield on 12 February 2020 – coincidentally, the 211th birthday of our "first rail president" – the biggest population of potential east-west rail passengers consists of the students, staff and faculty at the University of Massachusetts Amherst, along with the Five Colleges communities located around Amherst. Students, many with families and friends in the eastern part of the Commonwealth, already make regular trips by private car or bus; their access to internships and jobs in the Boston metro area would be greatly enhanced by east-west passenger rail; a station in Palmer with a direct rail shuttle link on the existing passenger-ready track to Amherst, would significantly increase ridership projections and reduce the per-passenger cost for the project. While faculty and staff are a smaller fraction of the Amherst-area population, they and their non-student neighbors also account for thousands more east-west trips each week; if even a portion of these long-distance travelers made the transition to rail transit (an attractive option: it's easier to get work done on a train than in a car), they'd form a base of regular east-west commuters. For these reasons, and as an official from Ware suggested in her later remarks at the same Springfield meeting, it's essential for both UMass Amherst – home to nearly 30,000 students and the largest Massachusetts employer in western Massachusetts – and the Town of Amherst to have "seats at the table" in planning for east-west passenger rail. I urge you to engage with the UMass Amherst Chancellor's office and with the Amherst Town Manager to make those "seats" available. Cordially, -- Rob Kusner	Email to DOT Planning
03-02-20_2	Roy Davis		davrxr@gmail.com	I reside in Upstate New York. Has the MassDOT also examined working with NYSDOT to operate the possible future service to Albany-Rensselaer where trains can be turned and serviced? This would assuredly cut costs and increase ridership for just 49 more miles beyond Pittsfield. Thank you for your attention. Roy Davis	Email to DOT Planning
03-02_20_3	Steve Wheelock		steve.wheelock.phd@gmail.com	Makaela Niles I was unable to attend the most recent public meeting in Springfield. I don't know whether this is a valid criticism but I didn't see any benchmarking comparisons on the ridership from Pittsfield to Boston reported in the local news. I would like to know if the consultants hired by DOT did any benchmarking in analyzing possible ridership between Pittsfield and Boston. The news reports I read didn't indicate the consultants benchmarked their studies by checking their assumptions or making comparisons to other regional commuter lines. The reason I ask is the estimated number of riders between Pittsfield and Boston seemed extraordinarily low, judging from the news reports. If there was no benchmarking I should like to comment that MetroNorth's Harlem line has about the same trip time (2 hrs. 18 min for Pittsfield to Boston) as the trip from wassaic, NY to Grand Central, 2 hrs. 5 min to 2 hrs. 14 min. and MetroNorth runs 4, 7-car peak trains weekdays in the morning from 5:00 am to 7:00 am from Wassiac and on weekdays afternoons 5, 7-car peak trains from Grand Central to Wassaic between 4:00 pm and 9:00 pm. Could you explain why or why not this wouldn't be a valid benchmarking comparison and why benchmarking was omitted? Thank you, /Steve Wheelock/	Email to Makaela Niles

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-01-20_1	Garry Sager		garry_sager@hotmail.com	I read your study and don't understand the need for such expenses. It doesn't seem to help on general transportation in Mass. It seems it would provide more service to more passengers in Connecticut than most areas of Mass just look at the north corridor rt 2 as the major route across the top of the state. Also with more new technology wouldn't this be replaced with self driving buses or another type of transportation so better roads seem a better alternative. It seems a little old fashioned that we are expanding rail after allowing it to slowly disappear. There used to be trains from Boston to Montreal, Albany and other places.	Email to DOT Planning
02-13-20_1	Keith Benoit		kbbenoit@umass.edu	Hello, Is the "cost per rider" calculated as a one time fee or an annual basis? I would implore MassDOT to not be concerned with even the highest cost per rider that they calculated because personally operated vehicles (POV) cost even less than this and they operate at only 20% efficiency when they are driving (one passenger in a five passenger car). POV's then sit idle for 99% of the day. The cost per rider can be seen as taking a POV off of the road, which furthers state sustainability efforts. Furthermore, the network effect of connecting the states 1st, 2nd, and 3rd largest cities cannot be calculated. I would not support any option that does not include a stop in Palmer. My master's project in regional planning is creating a transit-oriented development plan for the Town of Palmer and in my analysis, the town would receive economic benefits that exceed the state's projections. The town also is connected historically to Boston, New York City, Springfield, Buffalo, Easton, and Holyoke because it has historic landmarks from landscape architect Frederick Law Olmstead and architect H.H. Richardson at the old rail station. The landmarks in all of these cities can be reached by rail if the East-West Passenger Rail Service is implemented with a stop in Palmer. MassDOT is severely discounting the amount of professional commuters that would take this line from Springfield and Palmer. Several of my colleagues would be willing to commute to Boston where the average pay is \$20k plus higher than Western Mass and live in housing that is significantly cheaper. I would further not support any option that contains a bus. Transferring severely diminishes the travel time and detracts from the "pleasure travelers" experience - some who take the train because it is not a bus. It would also make travelers with mobility or other impairments more challenging. Additionally, competing with the bus service will force them to become more competitive and create better options for their customers who tend to fewer mobility options. Thank you	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
03-04-20_1	David Fite		david.fite90@gmail.com	I am writing you to again express my support for the proposed East / West rail corridor, and offer some final thoughts as you head into the next phase of design. - A combination of options 4 and 5, with stops in Palmer and Chester, seems like a clear front runner at this point. This meets the goals of the Western Mass Rail Coalition, and the state itself. It would be really helpful in the next presentation to have detail call outs of the area(s) in option 5 where we'd do work. Having these call outs would help the public understand the challenges we find in these hilly areas. - Federal funding is very unlikely. - The public needs to be provided with a better understanding of why your estimate is high. There is an ethical obligation to review the estimate in the previous study and reconcile the two estimates for the public. It may be that a good portion of the increase can be explained by escalation and a better understanding of the work, but the public is owed an explanation and you will be asked about this again. - The state should provide a range of scenarios for induced demand, including scenarios that exceed national averages, or approach NYC, DC, and even European levels of use. What it looks like without induced demand is not enough. Having this gradient helps the public see a range of more plausible outcomes. - The state needs to provide us with a price to upgrade to electric by 2030 and an add alternate to do it now for each final option. This is inevitable work. - It may be helpful to show something in a perspective view or section so the public can have an understanding of change in grade in Central Mass. - Option 6 causes a lot of problems. The existing corridors have a long history and communities have already been built around them. Reusing the existing corridor causes less disturbance and reintegrates rail into the community organically. I have been driving the Pike a lot lately, and I have been noticing some the pinch points at the overpasses and the areas in Central MA where you would be near water, or doing steep grade change. I have a really hard time imagining this work occurring in certain areas without it completely destroying people's commutes for a period of time. Please keep up the good work, we look forward to seeing your final options.	Email to DOT Planning
03-15-20_1	Lauren Miller		lonewolfette9847@live.com	Western MA is home for a lot of people working in Eastern MA (lets just say Boston). An alternative to driving would be a huge help. Whether the need to go dramatic or not is up in the air. My hope had always been for Amtrak to add a few more Lake Shore Limiteds. One per day in each direction makes it nearly impossible to get anywhere beyond Boston or NY within the same day. ALB - NYP - PHL takes less than one day but getting to ALB requires a good drive from Western MA. Of the 6 plans, at least 3 include Pittsfield. Unless the Berkshire Flyer (PIT - NYP) sees the light of day, it'd be nice to have 1 of the 3 plans that include Pittsfield.	Email to DOT Planning
03-17-20_1	Travis Pollack	MAPC	TPollack@mapc.org	see PDF (criteria for selecting three alternatives)	Email to Makaela and ethan
06-09-20_1		Chester Board of Selectmen	rdchester@comcast.net	see PDF (support for station in Chester)	Letter/Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
06-10-20_1	William Meehan		meehan.w@husky.neu.edu	I appreciate that the study has reconsidered its ridership projections for the existing alternatives, but I think that there should also be alternatives ending in Albany. Pittsfield on its own may not provide significant ridership, but there would be a large number of potential riders in the New York Capital Region. Trains could also be scheduled for easy transfers to Amtrak trains heading north to Montreal, west to Buffalo, or even south to New York. Current scheduled travel time from Pittsfield to Albany-Rennselaer on the Lake Shore Limited is 64 minutes. With targeted track improvements west of Pittsfield, travel time from Albany to South Station could realistically be less than 4 hours in alternatives 3-5 and around 3 hours in alternative 6. Any of these would be less than the current travel time from Boston to New York, and alternative 6 would beat driving in even light traffic. Extending this rail study to Albany could feasibly open up new catchment areas and reduce cost per rider. For that reason, I believe it's worth analyzing.	Email to DOT Planning
06-11-20_1	Paul Makinen		pmakinen_20712@yahoo.com	I feel some sadness reading the high cost estimates from the Advisory Committee 5 presentation, because I'm old enough to remember when Conrail removed a lot of the second track between Springfield and Worcester (I frequently rode Amtrak between Springfield and Boston when I was at UMass 1976-1980)---wish they had rail-banked it, but that was before state governments commonly paid for that kind of thing. Anyway, I'm glad there is finally some progress on this.	Email to Makaela
06-11-20_2	Greg Moore		mooregr@greenms.com	I missed this, but let me say as a resident of New York, I would LOVE increased east/west train service to Boston. For example a decent early morning east bound train, say leaving Albany a 7:00 AM would get my support! Bring it on!	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
06-15-20_1	Dave Phillips		dphillips8_99@yahoo.com	I continue to monitor the Mass. east-West Rail Study from afar. I see that you are making progress. A few comments: • While using the Downeaster and modified Hartford line models have produced somewhat better results I still think that they severely underestimate the market potential relative to the proposed investment. Specifically, if you are investing in "separate track" (which is essential west of the publicly-owned, predominantly-passenger section east of Worcester) you need to use it intensively (i.e. at least, hourly) to get your money's worth. The usage of the Mass Pike gives us a clue that there is enough of a market to support hourly rail service. The Downeaster and Hartford models don't reflect the huge market impact of hourly service. • Regarding which alternative(s) should be included in the final round of analysis, it should be a hybrid (as I have commented previously): - o Boston-Worcester: shared upgraded track will be fine, since freight is carefully controlled (the East-West line should not be "charged" for the upgrades, since they need to be done, anyway). - o Worcester-Springfield: As noted above, sharing track with CSX freight has been demonstrated in various corridors elsewhere as unable to deliver fast service at reasonable cost. The success of the the Commonwealth's purchase of the Worcester Line has demonstrated the efficacy of this approach. There is no reasonable choice between Worcester Union Station and Auburn and between Palmer and Springfield Union Station but to construct next to CSX. However, the Mass Pike corridor provides a much shorter/straighter/faster opportunity between Auburn and Palmer, bypassing the circuitous historical rail route; grades are not significant for well-powered passenger trains, especially, if electrified. If you are paying for new track (I assume that we are talking new double-track which will readily support as much service as you want) you should put it in the shortest possible route (reducing the amount of track required). - o Worcester-Hartford: The current study has ignored the potential for creating a new inland version of the NE Corridor by sharing the investment in new tracks between Worcester Union Station and Sturbridge (enroute to Springfield) to create a direct Boston-Worcester-Hartford-New Haven-NYC route, greatly benefitting Worcester and, thus, Massachusetts. Only 35 miles of new rail route in the I-84 corridor would be required. Hartford is planning a new 4-track station as part of the re-construction of I-84, which will readily support this level of service. - o Springfield-Pittsfield - Given the lower potential ridership, a phased opening of this segment, construction to lower standards without electrification and, perhaps, with track sharing, should be considered. If the rest of the route is electrified and operated with multiple-unit cars, a portion of the fleet could be equipped with diesel engines (or batteries) and cut off in Springfield to continue to Pittsfield. - o Pittsfield-Albany - It's only about 32 miles from Pittsfield to the connection to the passenger-only line to Albany (Rensselaer). Given the increased market this connection to the Empire State, and points west, this would provide, it would seems worthwhile to do some "back-of-the-envelope" analysis of the added cost vs. added ridership/revenue.	Email to Makaela

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
06-25-20_1	Maurice J. Ferriter, Esq		mferriter814@yahoo.com	Thank you for the opportunity to comment on the proposed rail service from Springfield, and parts west, to Boston. A little background. I used to ride the “ Montrealer” from Holyoke to Grand Central Station, as early as 1939 to see the World Fair on Long Island. I rode the “tracks “ from Holyoke to New York for many years thereafter, including going to serve during the Cold War and later for the Korean War. I rode trains in Europe, Asia and during the war in Korea. I traveled from Holyoke to Fort Hood Texas, from there to San Francisco on a troop train and later from San Francisco to New York on a troop train. My point, I have had experience riding the “rails”. I served as counsel to the Holyoke and Westfield Railroad and negotiated it's settlement with the Penn Central during PC's bankruptcy proceedings. I was one of the founders of the Holyoke Heritage Park Railroad, a nonprofit that was supported by the the Commonwealth, and ran from the Holyoke Heritage State Park to Westfield. I left for other matters some years later and retired as President Emeritus. I am a supporter of rail service from the Golden West to Boston. I support the proposals of Richie Neal and Eric Lesser, I believe the time has come! I have recently taken the Amtrak from Springfield to Boston, at the suggestion of my daughter, who resides in and practices law in bean town. She was concerned with my driving on the Mass Pike with the heavy traffic and wild driving. I agree with her and I shall continue to take the train. I thought my constructive criticism might help you develop a plan that made the experience more acceptable to the traveling public. Richie Neal's fight to restore the Springfield Station is a wonderful start and should be an inspiration to State government to continue to upgrade the service at the station. The passengers should have better access to the “rails”. I understand that this is presently being addressed. They should have someone on the platform to inform and direct them to the correct train. There was confusion as to the track and to which train, when two arrived at approximately the same time. There was confusion as to which car on the train to Boston was to be boarded. In short, communication was lacking. I was fortunate to have a seat it the business car and found it comfortable, but lacking the same experience I found on the European trains. I felt I was back on a 1930's train. The snack bar was unkept and the attendant seemed to be disinterested! Maybe I'm just getting old and grumpy, but I didn't have the same feeling on my last trip by train from Venice to Florence on a high speed train! We can do better! One other matter that needs attention is the timing of the service for a day in Boston. It just makes common sense that a train that leaves Springfield in early morning and returns in early evening would attract many more customers. It will also relieve the congestion on the turnpike. In sum, I believe that with the proper planning we will be able to have outstanding service on modern trains, with friendly employees and have many riders! I hope my comments are helpful and I wish you great success in this venture!	Email to DOT Planning

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
06-29-20_1	Marc Warner	Warner Transportation Consulting, Inc.	marc@warnertransportation.com	Mr. Britland, I watched the video of the June East-West rail presentation, but felt that much of the demand study seemed a little breezy. Perhaps this was appropriate given the general audience and the technical nature of demand forecasting. I, however, am very much a technical person--I have a Ph.D. in transportation systems from MIT, and have been leading travel demand studies for the last 28 years--and am curious about the modeling techniques and assumptions used. What zone structure and market segmentation did the modelers use? What is the forecast year? What assumptions did they make about the rail fare, station parking costs, and auto costs and travel times? What is the basis for the coefficients in the mode choice routine? What assumptions did they make about induced demand? I presume the answers to these questions are in the latest AECOM and WSP demand report. Can I get a copy?	Email to DOT Planning
09-11-20_1	Noah Pott		npott@bates.edu	Dear Makaela, My name is Noah and I am a student from Great Barrington, Mass. studying urban and transportation planning. I have a question/comment about the East-West Rail Study: Is electrification of the rail corridor (using overhead catenaries) being considered at all? While having a somewhat more expensive construction cost, there are numerous benefits to electrification. Trains running on electricity can accelerate considerably faster than their diesel counterparts, reducing travel time significantly (especially over longer distances). They are also capable of much higher speeds and are much more reliable than diesel engines (is the 110mph speed limit on Alt 5 and 6 due to rail infrastructure limitations or diesel locomotive maximum speeds?). Electric locomotives are also MUCH more environmentally-friendly than diesel locomotives, and the operating and maintenance costs are significantly lower as well. If construction cost is the main barrier, various agreements could be made with CSX and MBTA , as both would have an incentive to switch to electrified rail — CSX could run faster and cheaper electric locomotives with their freight trains in the Mass section of their network, and MBTA would reduce operating costs and travel times, and increase reliability and ridership with an electrified commuter rail system. Amtrak could also benefit, with greater integration into the already-electrified Northeast Corridor. All of this would also contribute to environmental goals — something that Massachusetts prides themselves in dearly. I think that a hybrid of Alternatives 5 and 6 would be ideal, and I think that the possibility of electrification should at least be studied/considered. If some of the rail alignments for reducing travel times in Alt. 5 were applied to the extension to Pittsfield in Alt. 4, with an amendment to consider catenary electrification (greater reducing travel times and boosting frequency), Massachusetts would have a 1st-class passenger rail network that would catch the eyes of the entire Northeast and beyond. Thank you for your consideration of my comment, and I look forward to hearing back! Noah Pott of Great Barrington, MA	Email to Makaela Niles

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
10-02-20_1	Thomas Casartello		tomcasartellojr@gmail.com	Good morning, I am a resident interested in the East west rail study. I watched the advisory committee meeting the other day where the cost benefit analysis numbers were presented. I was wondering if the project team has calculated separate cost benefit numbers for the two segments (what the cost benefit would be for the eastern Springfield - Boston segment vs the western segment if a phased approach was done.) Has a phased approach been considered as a viable approach? I think a great phase one approach would involve building out the Springfield to Boston segment and then launching with full service to Springfield and a pilot service to Pittsfield on the unimproved Springfield to Pittsfield line where perhaps one or two round trips would extend to Pittsfield - the proposed project doesn't improve speeds as much west of Springfield so I think If a couple round trips could be fit into CSX's schedule it would be A feasible pilot with the Springfield to Worcester improvements. I also believe Amtrak is probably the most logical choice for the operator. I think this corridor is more feasible as an intercity route connected with Amtrak's national rail network than as a commuter service and it would provide an opportunity to collaborate with Connecticut on a common pool of rail equipment for all the regional intercity rail services. I think a great way to design the service is to operate most of the round trips as New Haven to Boston trains with perhaps a single Washington - Boston train along the inland route. To complement this I think it would make sense to look into developing the Two round trips to Pittsfield as Albany - Boston trains as connectivity to Amtrak's Empire Corridor would probably improve the feasibility of that segment and would complement the Lake Shore Limited well. Thanks for the consideration of these comments and I intend to submit them at the public meeting also. An additional comment - I believe Westfield should be added as a stop.	Email to Makaela Niles
10-22-20_1	Marc Warner		marc@warnertransportation.com	If you get a chance, please pass these on to the relevant speaker at the meeting this afternoon: 1. The comparable route methodology chart on page 64 of the draft report shows income, bus vs rail mode, and need for a transfer among the factors used in the ridership forecast. What formula or parameters did the consultants use to account for these variables? What was their basis for these formulas or parameters? 2. Given that the cost-benefit ratio for all of the options seem to be below the level to warrant federal funds, what is to be gained (other than by the consultants) from a further analysis of non-passenger transportation benefits? 3. Even if Congressman Neal did come through with an earmark for substantial capital funding, would the state continue to support East West passenger rail if it were obliged to cover the costs of the needed operating subsidies?	Email to Makaela Niles

11-20-20_1	Bruce Hain		brucewhain@gmail.com	ALTERNATIVE 5 - POTENTIAL CORRIDOR REALIGNMENTS There are seven proposed realignments described vaguely under Alternative 5. Your commenter has attempted to delineate them as far as possible with some degree of exactness, to see what their physical properties might be, and what consequences their realization might entail. The proposed realignments are addressed as Shortcuts 1 through 7 below, and are numbered as running east-to-west. Shortcut 1 Auburn-Oxford-Charlton: Shortcut 1 is the lengthiest of the seven proposed realignments at about 3.2 miles, and runs through mostly-level terrain along the north side of the Massachusetts Turnpike. The exiting of traffic from and reentry to the existing line would present problems due to its two-track configuration in hilly terrain (reduced to one in many places) where adding additional tracks has not been addressed, requiring local traffic to somehow be shunted aside while the faster traffic passes to and from the Shortcut. Further: This Shortcut establishes a dangerous precedent as shown in a number of drawings, where an apparently desired but not otherwise documented or described extension of it is shown bypassing its connection to the old right-of-way on the east, and thereby bypassing the great passenger station of Worcester, which has already had its train capacity and amenities gutted and debilitated perhaps never to be restored. This is a modus operandi seen in extremely numerous cases throughout the US in the decades since World War II, where such great stations from the golden age of rail expansion - offering speed and capacity impossible to duplicate today - have been debilitated, ruined and demolished. (See St. Louis, Cincinnati, Albany, Troy, Detroit, Birmingham, Buffalo, Joplin, Kansas City, including three credible attempts to get Grand Central demolished in my lifetime.) AMTRAK HAS SHOWN A DISGUSTING DEGREE OF COMPLICITY IN THIS. My viewing in Google Street View shows Worcester to possess old buildings of amazing quality and extraordinarily high quantity from the 20th Century and before, placing it in a special category of extraordinary and irreplaceable assets that must be preserved as part of the American experience. The existing Worcester Station is essential to that goal. And besides: THE EXISTING WORCESTER STATION IS THE BEST BET FOR ACHIEVING PASSENGER DRAW. It would further be achieved by offering passengers good service from the towns along the old line where service has been abandoned - feeding the big interchanges such as Worcester - but I doubt that is what your consultants and engineers have in mind, because the disgusting precedent in our faces- and these documents - bely their true intentions. This Shortcut 1 must be opposed with all possible force and urgency. Shortcut 2 Charlton: Shortcut 2, among others, is a nonstarter, and it's difficult to imagine it not being clearly and intentionally so. The approximately 1.5-mile route cuts across a well-to-do, wooded residential area and private school campus, and is elevated in it's configuration to some significant degree, making it the more intrusive and undesirable as seen from the ground. A number of seizures and demolitions would be required in addition to the properties that will be otherwise ruined as against not having the shortcut in close proximity. The alignment bypasses Rochedale, set at a fairly broad curve between two long tangents on the old line, where a station might be set up - and no doubt previously existed - to serve the local populus and feed passengers onto the regional and proposed high-speed services. Your planners could not but fully expect what would happen in terms of local uproar and litigation if construction of Shortcut 2 were to be attempted. Shortcut 3 Charleton: Shortcut 3 originates in Charlton Depot, a place where a station might logically be expected to serve local passengers, and to feed regional and proposed high-speed services thereby. Here the original line cuts round the perimeter of a rock hill in a long 1200-foot-radius curve (good for 45mph) encompassing about 90 degrees. Planners propose replacing this with a surmised 5000-foot-radius curve, cut or tunneled deep into the rocky wooded hill in this well-to-do residential area. The realignment would be about 4700' long. At its deepest your commenter surmises the tunnel or cut would be about 110' feet below the surface at top-of-rail, and according to the conditions encountered might necessitate a substantial broadening of any cut towards the surface elevations, making for a big gash in the landscape. Whether tunnel or cut, the "gash effect" would still obtain at the ends of the new alignment, where any increase in radius would result in bringing the line closer, and onto, the properties particularly of the fancy and venerable old houses found close to the line in Charlton Depot, - with a proportional increase of intrusiveness accompanying any degree of expanded radius. Naturally the shortcut will increase the rate of ascent for eastbound traffic to about 1.4%. It is unknown if the original well-liked gash is to be abandoned with advent of this newer better one. All told the proposal seems unlikely of realization because of its intrusiveness. Shortcut 4 Spencer: Shortcut 4 would probably be accomplished by constructing an approximately-4350-foot-long double-bore tunnel. But the places where the tunnel or cut comes level with the land would entail the same type intrusiveness encountered above, plowing through a number of houses and properties, the owners of which would	Email to Makaela Niles
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				likely be duly offended by the damages proposed and resort to litigation. Besides the expense and likely litigiousness of these Shortcuts 1 through 4 - including possibly two double-bore tunnels (That's three miles of tunneling right there, involving a minimum of four boring operations: picking up the parts and reassembling the mechanism for each succeeding bore.) seen by planners as enabling a continuous higher speed through the area, of something like 80 - not average speed - they fail to take into account that the route they're traveling so fast is taking them in the wrong direction. In getting from Boston to Framingham, Worcester, Brookfield, Palmer and Springfield, the route(s) chosen in modern times should have some relative bearing in the right direction. In olden times railroad engineers would attempt to select the lowest obstacle impossible to cut or bore through and arrange a circuitous and therefore gradual approach on either side of it, called developing a grade. With modern capabilities this is no longer the only option, yet planners here are proposing developing the old skewed headings for high speed travel, when they should be used for feeding the high-speed express service generally located elsewhere. As an example, the 7.6-mile East Brookfield-Worcester Tunnel described in the foregoing comment of November 19 would take at least 25 minutes off the time to travel all of these improvements, combined with the compulsory existing alignments - and probably for less money - especially given the long and potentially arduous litigation involved. (The said tunnel has the distinct advantage of being located nowhere at all through much of its length for some practical purposes.) The old Boston & Alabany is a thing of incalculable value, as much a part of the beloved local scenery as the scenery itself, and the practical part of that value lies in serving the communities along the line and feeding the express service. Shortcut 5 East Brookfield: It's difficult to tell what the planners mean by proposing some kind of upgrade at East Brookfield. The curve there is fairly broad at R=2750' and has a substantial spiral offset. It is hemmed in by the somewhat soggy nature of the surroundings through which much of it passes, which could get litigious where alterations are concerned, and the relatively new CSX car rack facility (which appears little used) requiring an interlocking amounting to a single mainline switch that, according to American custom, must have a tangent section of a certain length facing the points - which tends to tighten the curve otherwise. I cannot see any advantage to changing much of it, but that's what you get when paid planners are permitted to conduct their consultancy without having to say what they're about. They should be about removing grade crossings in Framingham. (I mean, is there a big sewer or something? What about a siphon? The predicament of Framingham is omitted from the study.) Shortcut 6 West Brookfield: The West Brookfield upgrade, far from instituting a stop at West Brookfield, seems to contemplate eliminating a rather speedy alignment including a curve with 2500' radius having long tangents on either side of it. Planners seem to be considering replacing same with another double-bore tunnel, of deeper draught and superior length to the ones already discussed here. As an example of an R=2500' curve that many are familiar with: the tunnel from NY Penn Station to New Jersey (part of the greatest railroad engineering achievement of all time for a hundred years standing, till China) has such a curve at it's New Jersey portal, and by the time the last car's around it you're doing 80 (wonder of electric traction) though what with propaganda kinks and various and sundry, the speeds have lately slowed. The instant proposal is a silly waste and not worth the enormous cost of construction and maintenance - being as it is, located at one of the extreme nodes of the existing line's circuitousness and barely serving to abbreviate it - especially if you consider the needless custom of building two tunnels, each just slightly too small to accomodate two trains (whereas with a two-track tube trains can move at higher speeds) owning to "safety reasons" (see the series of deadly tunnel fires in the Alps) which are easily debunked as something that might be considered extortion in some circles. Shortcut 7 Warren: It's impossible to tell what this improvement would entail. Perhaps it's intended to move the tracks away from the carefully shuttered station so it can never be used again. Bruce W. Hain Queens, New York B.A. Music, Marlboro College, '79 November 20, 2020 Sole Academic Qualifications 646-710-0869 RAIL-NYC-ACCESS.COM	
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ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-1	James Garrett		jgarrett@hatfieldps.Net	Your study concludes with saying you need more studies! You should be ashamed of yourself Sec. Pollack and Gov. Baker! Found these 1300 other pages of studies you lying liars! https://web.archive.org/web/20170106024324/http://www.massdot.state.ma.us/northernnewenglandrail/Documents.aspx Just admit that the Picknelly brothers are pulling your strings and drop the "nice Republican" act.	Comment on Draft Public Report (October - November 2020)
DraftReport-2	Ann Marie Messbauer		massmess@juno.com	I understand that this is a very complicated and expensive project. I have read the summary of the alternatives and would like to support the Hybrid 4/5 plan. (I live in Springfield.)	Comment on Draft Public Report (October - November 2020)
DraftReport-3	Roland Cadorette		rbcado2780@comcast.net	I would like to see East-West Rail in Massachusetts become a reality.	Comment on Draft Public Report (October - November 2020)
DraftReport-4	Athena O'Keeffe	Town of Amherst, Clerk of the Council	rbcado2780@comcast.net	The Amherst Town Council voted to adopt the following resolution on October 19, 2020: RESOLUTION SUPPORTING THE EAST-WEST PASSENGER RAIL Whereas, residents of Amherst are underserved by public transit connecting them to Worcester and Boston; and Whereas, the Flagship Campus of the University of Massachusetts is located in Amherst and many of its students, faculty, and staff would benefit from public transit connecting them to eastern Massachusetts, including other UMass campuses and work and internship opportunities in Worcester and Boston; and Whereas, train service would provide an alternative to travel on the heavily-congested Massachusetts Turnpike; and Whereas, travel by rail reduces carbon emissions and air pollutants; and Whereas, inequity in public transportation creates an environmental justice issue for low-income and minority populations living in Amherst; and Whereas, Amherst is a potential passenger rail stop on the Central Corridor rail line, running between New London, CT and Brattleboro, VT; and Whereas, a passenger rail stop in Palmer could serve as a transfer point to train service north on the Central Corridor rail line to Amherst; and Whereas, PVRTA bus service connecting Amherst to Belchertown Center could be extended to Palmer as an interim step, pending restoration of train service to Amherst station. NOW, THEREFORE, BE IT RESOLVED, the Town of Amherst supports East-West passenger rail connecting Springfield and Boston with a station stop in Palmer. BE IT FURTHER RESOLVED that the Clerk of the Amherst Town Council shall cause a copy of this Resolution to be sent to Massachusetts Governor Charles Baker; members of the MassDOT East-West Study Advisory Committee; Massachusetts President of the Senate Karen E. Spilka; Massachusetts Speaker of the House of Representatives Robert A. DeLeo; Members of the Joint Committee on Transportation of the General Court; State Senator Joanne N. Comerford; and State Representative Mindy Domb.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-5	Gail Farnsworth French	Quaboag Region Coordinating Council, Chair	gfarnsworthfrench@yahoo.Com	Dear Ms. Niles, The Quaboag Region Coordinating Council (QRCC) encourages MassDOT to implement east-west passenger rail service across Massachusetts with a stop in Palmer. The QRCC, a state-recognized transportation planning and advocacy group, meets monthly in Ware. Chaired by Quaboag Valley Community Development Corporation, its participants include representatives of local town governments, senior centers and COAs, social service agencies, regional hospitals, regional transit authorities (RTAs), a veterans advocacy group, regional planning commissions, the superintendent of public schools, community representatives and MassDOT. After years of helping to develop and promote the Quaboag Connector van service, the QRCC understands the transportation needs of residents throughout the Quaboag Region as it provides essential travel to daily destinations including employment, medical appointments, job training, educational institutions, and vital grocery and supply venues. The Quaboag Connector is a lifeline service for many, and we are currently in the process of re-designing it to be a model for expanded rural transportation. A video infomercial was created to locally and generate support for the Quaboag Connector service. We have included it here to provide you with a sense of its purpose and success: https://youtu.be/iKV-MHeW7ql Currently serving residents of 9 towns, the Quaboag Connector continues to expand to meet the transportation needs of rural residents in a region which has few other public transit options. Future planning for the van service includes pilots of fixed route service along major state highways connecting even more towns between Worcester and Springfield. Our current work and efforts would be greatly enhanced by the addition of train service at Palmer. Through coordination with the Pioneer Valley Transit Authority (PVTa) and Worcester Regional Transit Authority (WRTA), the Quaboag Connector already connects to their routes, thus providing a baseline for regional connectivity. A rail stop in Palmer would be augmented by the current Connector service providing a more seamless connection to the state at large. We envision the Connector as a providing a vital service to residents by acting as a feeder for the train stop. A rail stop in Palmer will boost the local economy by creating new business and employment opportunities, but more importantly it will result in numerous economic benefits to the Commonwealth. Our Region's beautiful and land-spacious communities have the potential to mitigate the unsustainable housing crisis now afflicting the eastern part of the state. Access to rail transportation in Palmer will relieve the current congested and unpredictable travel route of the Mass Pike and create an opportunity for productive worktime travel while lessening dependence on fossil fuels. True economic benefit for the whole state hinges on statewide equitable and accessible transportation options for all residents. We are diligently doing our part to assist residents of the Quaboag Region with transportation and are encouraged by this effort by MassDOT to equitably serve the Commonwealth. We have closely followed the East-West Passenger Rail Study, and look forward to future development, as soon as possible, of a much-needed train service connecting the four major cities of Massachusetts and including a Palmer stop in our Quaboag region. Sincerely yours, Gail Farnsworth French, QV CDC Chair, Quaboag Region Coordinating Council	Comment on Draft Public Report (October - November 2020)

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DraftReport-6	Sarah Kleinschmidt		sarah.kleinschmidt@gmail.com	Thank you for undertaking this study and considering some alternatives to our current transportation mess. I would like you to strongly consider the plan 4/5 or other higher cost options for the following reasons: - costs of climate change will be catastrophic to the region, for instance as Seaport and other coastal areas are underwater - climate change related flooding will likely shift more population West in state - expected ridership is difficult to estimate and likely below future actuals. For instance, I currently live in Cambridge but am interviewing for a job in Springfield. Transportation time and mode is a key factor as I decide where to live and work. Once these alternatives exist I would be very likely to take advantage of them even though I currently am not located in these areas. In short, I want to encourage you to think and act both broadly and boldly. Our current model is broken, leading to traffic, injuries and already downtown flooding. Leadership means being able to see big threats and make big moves to manage them.	Comment on Draft Public Report (October - November 2020)
DraftReport-7	Arnold Mark Zinan		benkarkis@comcast.net	There is no way, the cost of a rail system is justified by the need. People from Boston and the suburbs are not coming out to Springfield. They never have and never will. And, how many people, are going to travel to Boston. Especially, living with Covid, means working at home.	Comment on Draft Public Report (October - November 2020)
DraftReport-8	Kent Pattterson		kenthudson@aol.com	Although a New York State resident, the building of an East/West corridor is logical accross the state. Eastern Mass (BOS-SPR) is corridor decades overdue for building (and some trains may continue to NYC, WAS). Honestly, I'm surprised it took this long. Western Mass has attractive destinations, and could use some improved service to the state capital, Boston. Also, nearby is Albany west connections west.	Comment on Draft Public Report (October - November 2020)
DraftReport-9	Amanda Knightly		knightlya@gmail.com	I am a young professional who went to college in Boston, but my family is from South Hadley. The Boston area is far too expensive even for highly educated people like me to afford to live comfortably in. East-West rail along the Pike is practical and makes SO MUCH SENSE! Please take this step so our cities can continue to be home to young professionals post-COVID, and we can have viable housing options further out.	Comment on Draft Public Report (October - November 2020)
DraftReport-10	Greg Moore		mooregr@greenms.com	From New York, but if you could coordinate with NY to extend any trains to Albany, I would DEFINITELY ride, as would most of my family!	Comment on Draft Public Report (October - November 2020)
DraftReport-11	Andy Berkvist		berkvist@comcast.net	I am all in favor of adding rail stops along the East-West corridor. Making it possible to get from Pittsfield to Springfield to the Boston area (with stops in-between, or transfers to the local commuter rail) would be a boon to travelers (and reduce pollution). Staying off icy roads in winter would also be a plus.	Comment on Draft Public Report (October - November 2020)

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DraftReport-12	Nathanael Nerode		ncn_politics10@fastmail.fm	Failure to study service to Albany, NY has crippled the study. The added ridership and revenue from service to Albany -- paid for by upstate New York residents such as myself visiting Massachusetts -- would substantially defray operating expenses of any selected option. The study should be reopened to consider extending all Pittsfield service to Albany-Rennselaer station. Ridership and revenue from New York residents would improve the financial profile of the system while the operating costs would not change much. The availability of Amtrak's facilities at Albany-Rennselaer would provide operating synergies for the layover of trains between runs, and therefore reduce capital costs at Pittsfield -- Pittsfield would only require a station and not a layover facility. Doing the necessary upgrades to track necessary for the less than 40 miles from Pittsfield to Schodack Landing (where Amtrak's Amtrak-owned line from Albany separates from CSX) is likely to be cheaper than adding a layover facility in Pittsfield. The Amtrak-owned line should not need upgrades as it was upgraded quite recently and currently carries only one passenger train each way per day. This would also provide additional service options for Massachusetts residents visiting upstate New York, or points beyond -- or for Pittsfield residents commuting to Albany, which is well within commuter range. I strongly support the recommendation that "MassDOT should work with Amtrak to determine terms for increased right-of-way usage and the feasibility of service to Albany". I would add that the New York State Department of Transportation and New York State government in general, as well as the local governments in the Albany area, should be contacted as well. New York might want to add a station in Chatham. Other than this comment, I support any of the options (3, 4, or 4/5 hybrid).	Comment on Draft Public Report (October - November 2020)
DraftReport-13	Hugh Barrett		hughjbarrett@gmail.com	Thank you to the Mass DOT staff and the Advisory Committee Members for their work to date. The draft study notes in the Section 5.3, Next Steps and Recommendations, that additional area of future study include more detailed analysis of "potential economic and community impacts and benefits of East-West Passenger Rail." (Page 110]. The draft study then describes a number of potential area of study including local community engagement, potential economic benefits, and expectations of use by the business community. Notably missing from the area of future study include the potential environmental, community health and equity benefits of replacing automobile emissions with enhanced rail service. I would encourage the inclusion of the study of said benefits in the draft study. The COVID-19 pandemic has demonstrated clearly that air quality and local air particulate emissions have significant public health implications. A study conducted at Harvard indicates higher particulate emission is associated with an 8% higher death rate from COVID-19, which is consistent with other studies that show increased exposure to air pollution results in other significant negative medical outcomes. There is also research that demonstrates the disparate impact of air pollution on communities of color. https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-pollution/ I would strongly urge that the recommended areas of future study include the potential public health and economic benefits (reduced mortality, reduced medical and hospitalization costs) from replacing automobile commuting with enhanced rail service. Besides being the right thing to do, it may also indicate significant financial benefits to the Commonwealth beyond the usual business and economic development near the new train service. Thank you for your consideration.	Comment on Draft Public Report (October - November 2020)
DraftReport-14	Kevin Tierney		kevintierney@rocketmail.com	Would it be possible to get a copy of a ridership forecasting technical memorandum or other similar documentation to review? I tried to get additional technical details on the forecasting method from the previous Northern New England Study that is cited in the East-West report, but I could not find anything with technical detail there either. I have some concerns about the appropriateness of using the incremental direct demand methods that are generally described in the East-West report, but it may be that I simply do not fully understand what was done.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-15	Tom Robitaille		thomas.robitaille2513@gmail.com	I am a Chester resident moved here 4 years ago lived close by my whole life. I purchased my home in Chester to be secluded as most Chester residents have. I believe this would bring more people to Chester which would inevitably bring more crime. Leave Chester the way it is most people in Chester chose to live here to get away from big city's as Pittsfield, Springfield, and Boston, not looking for a direct route to those city's.	Comment on Draft Public Report (October - November 2020)
DraftReport-16	Robert Kearns		robsterkmc@gmail.com	I support East West Rail from Pittsfield, Springfield, Palmer to Boston. MassDOT should be planning to have a preferred alternative and have a timeline to do this as an economic development and stimulus project for the pandemic relief. I travel between Western Mass and Eastern Mass to visit my girlfriend and would take the train. I have taken the Lake Shore Limited East-West to experience the ride previously and it is a very scenic route. When I was an undergraduate student at the University of Massachusetts Amherst I also traveled frequently between Eastern and Western Massachusetts. Other students travel this frequently as well to visit family, go to internships or other matters. The Peter Pan bus is not preferable, I would rather take a train, and other students would as well. For the Public Meeting on October 22nd, I wish you allowed more comments and that we were able to see the comments of other participants and vote on them. I have seen this done in other zoom meetings. I had my hand up and was not allowed to speak because I asked a question in the Q&A. Is MassDOT assuming fixed fares or fluctuating fares for ridership? I would urge MassDOT to have fixed fares like the CT Rail, Downeaster and MBTA commuter rail over fluctuating fares of the Vermonter, Valley Flyer and Amtrak Northeast Corridor.	Comment on Draft Public Report (October - November 2020)
DraftReport-17	Betsy H. Port		betsyhp27@gmail.com	Dear Ms. Niles- I am unable to participate tonight due to a previous engagement. The significant work you have done is admirable but it was difficult to read all the charts and graphs online. The print was too small. I urge you to get things going ASAP and I hope you are no longer considering using buses in Western Mass to achieve the travel needs of our residents in Western Mass. Please send me the results of the meeting tonight. We sorely feel left out and abandoned in this area. It was easier to travel by rail in the 1800s around here! What a sad state of affairs!!!	Comment on Draft Public Report (October - November 2020)

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DraftReport-18	Peggy H. Davis		phd@ganeydn.com	I was glad to hear the comments at the Zoom meeting today. I would like to stress my interest in a train that would connect North Adams-Greenfield-Boston. I had the pleasure of taking the train to Glacier National Park and with the help of the motel operator, we did not need a car for our visit at all. In a similar fashion, I would love to see tourists coming to the many spots along Rt. 2 for vacations without their cars, using a network of buses or vans to get from one place to the other. Greenfield, Charlemont, Shelburne Falls, in my area, have many tourists. Personally, I would be using the train to go to Boston. I've used the Greenfield to NYC train once it started and know that, post-COVID, I would be using a train to Boston much more often than I currently drive to Boston. When I do so, I park at the closest station on the Fitchburg line and get to Boston that way. I hope to see a train I can take from Shelburne Falls, but I'd settle for Greenfield! Peggy 413-624-3204 389 Adamsville Rd Colrain MA 01340	Comment on Draft Public Report (October - November 2020)
DraftReport-19	Lauren Miller		lonewolfette9847@live.com	I am very pleased to see the study is moving forward. I am extremely hopeful to see Pittsfield included with rail access beyond the once daily round-trip of the Lake Shore Limited. Alternative #3 or #4 are my favored options. I believe they balance both sides of keeping costs reasonable, better speed options, and median impact of existing environment. Thank you.	Comment on Draft Public Report (October - November 2020)
DraftReport-20	Stephen		ginger4017@gmail.com	Why are people so infatuated with this idea? It will be a giant waste of taxpayer money for years to come. People don't want to ride the train and with situations like covid-19 no-one wants to be crammed together just like the subway.	Comment on Draft Public Report (October - November 2020)
DraftReport-21	Michelle O'Brien		mobrien005@nycap.rr.com	I'm curious about the study since I am very interested in having a rail connection from Pittsfield to Boston but have not seen-heard-or been contacted for any kind of poll that would ask area residents if they would use this service. I have only seen articles talking about the service. This is a service we desperately need.	Comment on Draft Public Report (October - November 2020)
DraftReport-22	Kate Fletcher	Town of Stockbridge, Planning Board	pbs.kate@gmail.com	Good morning, I was not able to attend the presentation and public comment session on the rail study nor have I followed the issue. I do not have a transportation background but it seems that train lines depend on density which could be problematic in this case if the investment in infrastructure involved is costly. That said, has improved bus service been considered as an alternative? I understand that there are buses with wifi and comfortable seating that are a far cry from the buses of the past (and probably present) with their dirty windows, odors of chemical cleaning supplies, inconvenient schedules and less than inviting stations like the one in Springfield. It would seem that an improved bus service could offer the flexibility and advantage of being scalable depending on demand. Thank you, Kate Fletcher Planning Board Member Stockbridge, MA	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-23	David Golden		outlook_391a54d24b9fc730@outlook.com	Hi Makaela. I am a resident of Palmer and had been involved in the early stages here of trying to bring back east/west rail service. I am so happy with how far this has come and do know it's far from a done deal but can't help but feel the excitement here in Palmer about the possibility. Palmer needs this shot in the arm as the last MA Pike exit with almost no commercial growth. This exit serves as the Gateway to Western MA and we should be thriving but we are not. As the Chairperson of the Palmer Master Plan Steering Committee, this is a major concern that has consistently been brought up and possibilities for that growth just continue to elude Palmer except for this East/West Rail stop! As I looked through the draft report and watched last evenings forum, which I applaud the folks who made this happen, I have to say that as a layperson with no real rail knowledge, Option 3 jumps off the pages to me as the smart choice to get this project moving. Funding is no doubt an issue so why wouldn't we save the billions for the sake of maybe 20 minutes saved travel time? I am confident that the price tag will play a huge part in the decision making and will push the decision back by probably years so let's present a viable option, #3, and get Western MA opened to the rest of the Commonwealth! We are ready, willing and able to make this happen for Palmer and all of Western MA! Thank you, David Golden	Comment on Draft Public Report (October - November 2020)
DraftReport-24	Sasha Gainen-Truslow		sgainentruslow@gmail.com	I'm baffled why Chester would be a stop on the proposed line. There's absolutely nothing there. Obviously the creators of this study have never been to Western Mass. Another issue is that an Amherst/Northampton stop makes much more sense than Springfield. The people who live in Springfield and its suburbs don't travel to Boston. They have no need for this train. Northampton/Amherst has seven colleges in the area which have a large population from Eastern Mass. There's currently not even bus service from these schools to Boston. The Pioneer Valley is majority middle/upper class who travel often. I'm sure they would love an easier way to get to Logan Airport. Northampton already has a new train station, and Amherst has an old one. Either could be used for this new project. Thank you.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-25	jeffrey scott penn		jpsed@verizon.net	hi guys - regarding the East West Rail link i have a few thoughts. thru Jacob's Ladder Scenic Byway and the National Wild and Scenic Westfield River, i have helped lobby for protection of the extraordinarily rare Rural lands of Western 413. such onslaughts as the Gas Pipeline, Acres of misplaced Solar Fields and Inappropriately sited Wind Turbines are harming this rare and delightful treasure of nature; this irreplaceable landscape. such unsympathetic projects are usually promoted for Economic Development. we must remember, this area's less expensive living is partly due to our relative isolation from urban centers. we live out here knowing we need to travel for services; it is not right to demand the services follow us - instead, we are stewards of this historic and beautiful Rural Landscape. that said, vast historical change occurred in three sweeps - late 18th century theft of all the lands from the native americans who, unfortunately, sided with the French in the French and Indian War. the second wave was the coming of the Railroad which led to intensive settlement around industrial establishments. the last wave was two-fold; the coming of the Automobile and the great depression which resulted in redirection of commercial travel and jobs away from the rural region to the urban centers and the slow eventual closure of local industry. in order to reinvigorate local economy, we need to recognize local character and qualities and augment them - Arts, Recreation, Home industries and rural-scaled local services. to this end, the best infrastructure to add would be Internet Access and Public Transportation. while it is compelling to add East-West Rail transportation, centering one new rural stop would not solve this. it would recreate the same type of overdeveloped node which we successfully argued to end the potentially devastating Turnpike Exit proposal. instead, the former Train Depot villages (Hinsdale, Washington, Bancroft, Chester, Huntington and Russel in our region) should be considered for a local service like the historical Rabbit Run of the Rural Quabbin area. this could be subcontracted to Historic Trains or part of the greater DOT and bring local people to Pittsfield, Westfield or Springfield opening the world to the Rural region without associated overdevelopment pressure. please consider thank you cheers jeff jeffrey scott penn, architect 77 worthington road huntington ma 01050 413-531-1868	Comment on Draft Public Report (October - November 2020)
DraftReport-26	Pieter W. Lips		wordworks@fairpoint.net	Mr. Britland, I have been casually following the progress of this study, even attended one of the regional meeting in Springfield, Mass. I had my advertising and marketing business in Pittsfield for many years and live just over the state line in New York. I'd be curious to know what discussions you have had with CSX headquarters in Jacksonville in regard to allowing 'slots' for additional passenger service over any shared track segments. Amtrak's train #448, the Lake Shore Limited was delayed an hour recently due to downed trees along the right-of-way east of Pittsfield. Also, where will locomotives and coaches come from? The German firm Siemens is building locomotives in the US now, State supported passenger services have been buying these locomotives. You are likely (certainly should be) of issues when acquiring passenger coaches from the giant Chinese coach builder China Railway Rolling Stock Corp. (CCRC). Thanks, Pieter W. Lips East Chatham, NY	Comment on Draft Public Report (October - November 2020)
DraftReport-27	Jonathan Adams		jonathan.r.adams@gmail.com	I would like to advocate strongly for the adoption of the Alt 4/5 hybrid option. Increasing maximum speed and reducing travel time by 10 minutes between Worcester and Springfield is critical to making rail travel competitive in central and western Massachusetts. As more connection options open up, particularly as an NEC alternative, this time savings will accrue even more for all future riders in this corridor.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-28	Brad Blauhut		bradblauhut@gmail.com	To Whom it may concern: As a traveler between Albany, NY and points in Massachusetts, I am excited about the prospect of increased rail frequency. Currently, there is one option - the Amtrak Lake Shore Limited. Even at it's best performance, it is not even an option I would consider. The trains are chronically late and Amtrak employees are rude. And even when it's on schedule, the trip from Albany to Springfield takes well over two hours. However, since Pittsfield is just 30 miles from Albany, and the ninth busiest station in Amtrak's system, I feel that extending your planned rail enhancement to the Albany/Rensselaer station would make your system MUCH more accessible. Thank You, Brad Blauhut bradblauhut@gmail.com	Comment on Draft Public Report (October - November 2020)
DraftReport-29	Tamsin		mcflusenpants4@gmail.com	I think an East-West rail line would be quite beneficial. It would allow for easier commuting between Boston and other more westerly cities in Massachusetts, and would also encourage in-state tourism.	Comment on Draft Public Report (October - November 2020)
DraftReport-30	Barbara Alexander		bjalexander@earthlink.net	I attended the Zoom on October 22, 2020. The study appeared to be engineered to produce a pre-ordained result. I speak as a Harvard PhD in economics, and a former Chief of Research at the Texas Public Utility Commission. If what seems obvious is, in fact, the case, I strongly advise the staff involved, especially the younger ones, to resign and go public with their knowledge about this process. One of the first studies I led at the Texas PUC was a cost-benefit analysis of a large power plant in the early 1980s, in which a more traditional staff group had rubber-stamped an industry request. Even the rather conservative PUC was determined to do better for the public interest and produce a genuine analysis. The Commission directed my group to re-do that analysis and to review all such applications in the future, being aware that more and more economic growth was being produced with fewer and fewer energy inputs. The Massachusetts DOT, by contrast, seems to be on track to cut off even the prospect of a re-established lifeline to the entire Western part of the state, in the teeth of a climate emergency. It is a travesty, and having taken part in it may haunt those complicit in it for the rest of their careers.	Comment on Draft Public Report (October - November 2020)
DraftReport-31	Matt Sokop		msokop@hotmail.com	A much simpler first step would be the construction on an exit from the mass pike directly to the Southborough metro rail stop along with a sufficiently size parking garage to accommodate the cars that currently park there with the additional cars that would come from western mass. Additionally, TOD could be included to make the location more of a hub of commercial opportunity with retail, residential and commercial space fully explored as options. Traffic from western mass to this new exit would be minimal and being able to take rail to Boston from this point would greatly reduce travel time to Boston as well as preclude the need to pay for expensive city parking.	Comment on Draft Public Report (October - November 2020)

DraftReport-32	Joseph Zagrobelny		joseph@nine-ai.com	We have a key follow up meeting with Massport this week to discuss iSAIL Transit from Logan Airport west you can help make it happen, and make it all the way to Pittsfield just imagine Boston to Pittsfield in 33 minutes versus over 3 hours Now imaging that for \$300M versus \$2.4 to \$6.6 billion!! Now imagine that we integrate iSAIL Transit with the future of education for ALL, based on the proven Tiger Ventures Alternative High School that prepares even the most challenged for graduation with the necessary skills to be successful in life – career, college, and many even start thriving companies right out of high school. As we work to decarbonize and embed equity and racial justice into all Urban-Rural planning, there's no better way than to get everyone engaged with iSAIL Mass – The Future of Community, Education and Transportation with Pods that Fly How exciting would it be to see ALL the Mass Communities be world leaders with Opportunity for ALL in a \$4 trillion ecosystem? Nine-AI is a team of very unique scientists (MIT PhDs), educators and seasoned entrepreneurs that rapidly get innovation into practice. We would love to see if we could work together as we revolutionize education, transportation and communities – to build the Mass-Global Regions we need, and reduce housing costs by 75% for underserved in East Boston with an education and transportation revolution. During the current pandemic, communities of color are bearing a disproportionate burden, and the large racial divide in America is widening. The Business Roundtable with 208 CEOs has a mission to change the game for Family Wealth for African American, Latinx and indigenous and “ensure every person can fully realize Opportunity and Justice in America.” https://www.businessroundtable.org/equity Several companies are Nine-AI partners. iSAIL is Integrated StreetSmart AI (SAI) and Lifestyle – AI based on functional theory proven to work where other methods fail. iSAIL is Super-disciplinary, multi-dimensional People-SAI Partnering to iSAIL Optimize Quality of Life – for ALL People and the Planet. iSAIL Learning & Transit will radically reduce the impact of racism and poverty on society and create great opportunities for everyone. It will reduce rents for the underserved by 75% in all major metropolitan areas and transform education with iSAIL HILL – Holistic Integrated Learning for Life. iSAIL HILL is based on the proven Tiger Ventures Alternative High School that prepares students for life by combining entrepreneurship and business with education. Many underserved students build thriving companies after graduation in communities with few resources – everyone is well prepared for what's next in life. iSAIL HILL, Tiger Ventures on Steroids, integrates the Next Generation Transportation and StreetSmart AI (SAI) to make learning Amazing, Engaging, Exciting and Rewarding – learn on a screen, apply in work and play – and get paid in the transformational Value Chain Optimization – driven by SAI-based Radical Finance Innovation for Schools, Teachers, Students and businesses of the future – today – guided with a fresh team spirit – and if necessary, trained Leaders for Tiger Ventures by our Dr. Suzanne McLeod – one of the great forward-thinkers in education. iSAIL Transit is Towers, Guides and Pods that Fly for 80-100 mph intracity/250 mph intercity at the cost of asphalt, \$2M-3M/mile and 1/100th the cost of even light rail at \$250M/mile, \$1B/mile for hyperloop (IF it works) and up to \$5B/mile for heavy rail. iSAIL is based on decades of R&D at DARPA, NASA and MIT with AI proven to work where other methods failed. iSAIL Transit will open up a whole new world of urban-rural affordable housing and land use optimization, turn commutes and freight delivery from hours to minutes, and Radically Reduce GHG emissions. SAI will ensure we don't have 737 max-type issues. Our iSAIL Tower architecture can include revenue from Transit, a breakthrough Renewable Energy T&D Backbone, EV Charging and 5G, and integrated into the education system for a transformation in learning and education from birth to end-of-life and funding from many sources – including the 208+ companies on the Business Council to end racism – I'll send you more details if you'd like. 5G is VERY critical to solving the Racism Public Health Crisis along with iSAIL HILL and Transit – to transform education and reduce rent for the underserved by 75%! Together, we can lead the Nation for meeting the our North America-Global (mobility) objectives, and start with near-term objectives that could include: 1. Freight demand modeling and analysis as we're engaged with the U.S. DOT – to build the Transportation Network we need – local, national and international	Comment on Draft Public Report (October - November 2020)
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ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
				2. Safety-Security – iSAIL Next Gen Communications and integration with the Air Force Team Awareness Kit (TAK) used by all DHS agencies – will help address is the 1,000% increase in border drug traffic 3. Workforce 4. iSAIL Energy-Fin-Transit – Massachusetts East-West-Regional-International - including connection to Montreal and Quebec Hydro for energy decarbonization. Please contact me to discuss how we can meet the urgent demands for East-West Mass transit innovation, decarbonization and education AND create Great Opportunities for ALL, especially those that have lost hope Thank you very much! Joe Joseph Zagrobelny Founder & CEO, Nine-AI www.nine-ai.com M: 781.825.3267 joseph@nine-ai.com	
DraftReport-33	David W.		dlw_public@mac.com	Dear Ms. Niles, I understand you are accepting comments about the prospect of expanded passenger rail service to and from the Berkshires. As a citizen of the Commonwealth, I would like to weigh in heavily in favor of renewed east/west rail connections between Boston and the Berkshires (Pittsfield and/or North Adams). It's not just a question of commercial costs, benefits, ROI (and ratios): it's a question of knitting together the state and its people, its culture, its ability to connect citizens with each other and to anticipate and support the future of telework in Massachusetts, to mitigate global warming by reducing auto traffic on our highways, and to help transform the economies of towns and cities from the Berkshires to Boston. It's "Field of Dreams": "if you build it, they will come." The 21st century demands and will reward clean, efficient, relaxing passenger rail to and from the Berkshires — to promote and invest in Western Massachusetts's economy and to better unify the state from east to west & west to east. Thanks to the Department of Transportation for its serious consideration and support for East-West Passenger rail in Massachusetts. Very kind regards, David W. Williamstown, MA p.s.: Thank you for please not adding me to any mailing lists. CC: Rep. Smitty Pignatelli	Comment on Draft Public Report (October - November 2020)
DraftReport-34	Annonymous		lekobe11@gmail.com	Consider a stop in Westfield, MA. Large college population would utilize this service frequently.	Comment on Draft Public Report (October - November 2020)

DraftReport-35	William B. Freedberg		willfreedberg@gmail.com	Dear Makeala Niles and Rail Study staff, I would like to add my comments about east west passenger rail.. I appreciate the vast amount of effort and funds that have been put into the state's studies of the rail system. I am very concerned that such very forward looking and ambitious proposals that are being put forth are so expensive that it will be essentially impossible to initiate any east west rail service at all during our current pandemic period of great financial stress. We are sure to be facing very strained finances for state and local governments, and certainly at the Federal level for some time. I believe it is essential to think in terms of small "PILOT" plans to initiate some small but meaningful service to see if that can attract ridership and test what the potential for more advanced levels of service can be. Under the present financial constraints there is no way that a large program, however attractive on paper, can be funded. We should advocate for starting simple and small. That seems to me to make more sense at this time than planning big and being unable to start at all. Why not start small? Our grandchildren who love Thomas the Tank engine stories learn about friendly good service provided by just Thomas and his two coaches Annie and Clarabel. Why not begin very simply with one engine and two coaches a day from where the MBTA ends at Worcester Union Station to Palmer and Springfield and over the hills to Chester and Pittsfield. Consider providing refreshments for travellers as they watch our beautiful scenery go by. Work with CSX who owns the tracks to create schedule times that work around freight schedules, and are good for East-West passenger needs without duplicating AMTRAK's Lake Shore Limited. That could create some good "P.R." for Amtrak and CSX. We hear hopeful talk about East West rail, but too much focus on big size and enormous costs. Can't we begin "starting small" with something less complicated and costly. Why not begin to serve the public and learn what the ridership will be. If starting this way proves successful with people riding and desiring more service that will be a clear green signal to move down the line towards bigger plans. This could begin in months, not years. Starting sooner and smaller makes more sense in our present difficult times than studying and restudying bigger plans for an ideal system that would not be funded in the foreseeable future. We could and should work on this NOW. Why wait for years of more studies and higher start up costs? This letter includes portions of a letter I sent to the Springfield Republican, the Berkshire Eagle, and the Country Journal a few weeks ago. Thank you for letting me comment with my THINK SMALL thoughts. Respectfully, William B. Freedberg	Comment on Draft Public Report (October - November 2020)
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ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
				18 Winter Street Northampton, MA 01060	
DraftReport-36	Martin Wasiak		martin.wasiak@gmail.com	This might be answered elsewhere, but why wouldn't the line be extended a mere 27 miles further to Albany? Isn't Albany a major rail stop which would bring in more passengers and thus reduce costs? Not to mention make the line significantly more useful to everyone?	Comment on Draft Public Report (October - November 2020)
DraftReport-37	Nicholas Schumacher		ncschu@gmail.com	My criticism with the results of this study and the results of many American rail studies are that people are only going to use a rail service in mass quantities when the rail service provides better and faster service than driving/bus. Based on the speeds I observed in the documents, I find it hard to believe that these benefits will be achieved from any option. Without traffic it's about 2 1/2 hours from Boston to Pittsfield. Taking a train that takes an extra hour or more is not going to be attractive to many people and is the reason why many long distance trains are not doing well in the United States. If the state wants to invest in rail, then it needs to invest with intellect, by investing in true high speed rail that can reach speeds of 150-200 mph and provide a real beneficial change to society. Accompanied by local transport options (busses) from train stations, high speed rail would get cars off the road and encourage people to take public transport over longer distances.	Comment on Draft Public Report (October - November 2020)
DraftReport-38	Clay Oshiro-Leavitt		clay.oshiroleavitt@gmail.com	E-W Rail is also shooting itself in the foot by stopping at Pittsfield - it should continue across the NY border and on to Albany (a metro area with a population of over 1m). By only providing service east of Pittsfield (rather than west as well), this limits the job and economic opportunities afforded to those living in Central and Western Massachusetts. By running through to Albany, this would provide travelers from Massachusetts with valuable connections to Vermont, NYC, upstate NY, Toronto, and Montreal. Furthermore, this leverages existing passenger rail infrastructure - the Albany-Rensselaer Amtrak station is a multi track, multi platform high capacity station with numerous amenities. Amtrak also has facilities for maintaining and servicing equipment in the Albany area. Both of these could be utilized, rather than requiring costly construction of lay-over tracks and facilities in the Pittsfield area. Continuing on to Albany would be a boon both for Massachusetts as well as New York, and provide the region with an integrated, connected network to numerous destinations.	Comment on Draft Public Report (October - November 2020)
DraftReport-39	Anthony Daly		anthonydaly@hotmail.com	Dear Makaela Niles, I am writing in support of expanding East-West rail to Pittsfield. This project would of course require smart planning and massive investment, but its potential to improve congestion inside 128 and share some of the economic dynamism of eastern Massachusetts with the western side is enormous. Please give full consideration to how this project can be successfully implemented. Many thanks for your time and consideration. Best, Anthony Daly North Adams	Comment on Draft Public Report (October - November 2020)
DraftReport-40	Frederick Smith		rs.js.ss@verizon.net	How can the Town of 7 Railroads be dismissed from being a stop for the railroad? With the MGM Casino now in Springfield, it will help everyone involved from people who want to go there, for people who works jobs that will be needed like the taxis and shuttles, etc. With the riots that have happened and still are in the large cities, don't you think that people will want to move to smaller, quiet peaceful towns pike Palmer? It's a win-win for many people and businesses. Fewer cars on the road definitely helps too. Plus people get jobs in other areas because these small towns don't have much of a manufacturing base.	Comment on Draft Public Report (October - November 2020)
DraftReport-41	Bonnie Kimberly Shackleford		bkshackleford@gmail.com	Yes, please include Palmer. This will help people in the Palmer area go to Springfield and Boston. It will save on gas and emissions. If the timing was right, I can also utilize the train to commute to Springfield for my job at Baystate Medical Center. Please help the community by including Palmer as a stop. Thank you and have a wonderful weekend.	Comment on Draft Public Report (October - November 2020)
DraftReport-42	Paul David DeVries		pauldaviddevries@gmail.com	I am still digesting the alternatives. Right now, I am leaning toward Alternative 4 or Alternative 4/5 Hybrid. I think making travel by rail more accessible will be a good thing for the state, speaking as someone for whom mobility used to be an issue.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-43	Sheryl Chase		sherylannchase@gmail.com	I would benefit from and east - west rail system. I live in Palmer and often must commute to the Boston area. Currently the drive time during peak hours can be more than 2.5 hours each way. Even if the rail system is not faster, I would gain the ability to work as I travel, making the commute time more efficient for me. I also feel this would reduce the effects of many cars exhaust, making a healthier environment	Comment on Draft Public Report (October - November 2020)
DraftReport-44	David Maloof		dfmalooof@gmail.com	Hello . . . I'm writing in support of East-West Passenger Rail service. I know that I (and my family) would visit Boston much more often if we had this transportation option. We have lived and worked in Boston, and miss it; but driving there is reliably stressful and relatively expensive. And people from Eastern Mass. surely could use a break, and could take the train out to Western Mass. It could be an educational experience: some of them might realize that there is life and culture throughout Massachusetts. Thank you, David Maloof	Comment on Draft Public Report (October - November 2020)
DraftReport-45	Michael Follo		braves9@gmail.com	To Mr. Ethan Birtland: I'm interested into transportation & the proposed Pittsfield to Boston rail service & I would like to know on when the Draft Environmental Impact Statement document will be completed as well as to when virtual public meetings will be held to get feedback on the DEIS. In addition, when will construction begin on the project & since South Station is overcrowded, is the proposed service going to operate only between Worcester & Pittsfield temporary or will it still go into South Station as planned, who will operate this service & what year do you expect that passenger service will begin. I would greatly appreciate to hear back from you in regards to this project, my e-mail address is braves9@gmail.com Sincerely, Michael Follo	Comment on Draft Public Report (October - November 2020)
DraftReport-46	Eileen Bauer		bauereileen01@yahoo.com	Phone: (617) 216-0978 regarding the East-West passenger alignment, why don't you straighten the line around Spenser, MA. Currently, it makes a big loop to the south. I realize it would require some leveling of the terrain and the taking of land but you'd eliminate the loop.	Comment on Draft Public Report (October - November 2020)
DraftReport-47	Cynthia Kowalczyk		cjkowal@charter.net	As a retired senior citizen I would love to be able to go to Boston for the day and take advantage of all that the city offers. I, along with many of my friends and relatives dislike driving the highways and crowded cities, especially I 90 especially where it intercepts with 84 and 290. As a college student I used the trains often from Springfield to New Haven and found it relaxing and where I could study or read along the way. I can see it would be very helpful for those working in the Boston area and living in Western Mass. Besides the fact that it would cut down on pollution and save wear and tear on your vehicle, especially in inclement weather. Surely would cut down on accidents caused by distracted drivers. I understand there are costs involved, but I'm sure the two parties can meet halfway and come up with a useful plan that would benefit all.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-48	David Phillips		dphillips8_99@yahoo.com	Mr Britland - I am satisfied with the Mass DOTs recommendation for Preferred Alternative for two of the three segments: 1. Use of the MBTA-owned line between Boston and Worcester - With the upgrades already planned by MassDOT to improve the existing commuter service in this segment (including eventual electrification) it will support good quality express service for trains to/from Western Mass. With electrification it will be possible to reduce the projected 53 minute travel time shown in this report for the 44 miles. 2. Use of track shared with CSX freight between Springfield and Pittsfield - Given the relatively low ridership anticipated in all alternatives in this section this solution is not inappropriate. The use of trains with dual-mode propulsion capability would allow them to operate through to Boston with electric power. The increase in ridership that would result from the network effect by connecting with Empire Service trains at Albany-Rensselaer needs to analyzed. My primary concern with this report is with its recommendation of Alt. 3 for the mid-section, specifically the portion between Auburn and Palmer. This segment is several miles longer and has much more curvature than the the direct routing via a Mass Pike alignment considered in Alt. 6, resulting in travel time for this segment of 1:04 for Alt. 3 vs. 35 minutes shown in February for Alt. 6. The route is shown as being built with a single track in this segment making it problematic whether the proposed 9 daily trips would be achievable; clearly, there would be no ability to grow the service by operating more trains. This would make rail service totally uncompetitive with driving or, even, bus service. The likelihood that CSX would permit a significant amount of construction in this constrained segment is also questionable. Alt. 6 had by far the highest ridership. The bottom line is that while Alt. 3 has the lowest capital cost, it would attract very few riders and, thus would require the highest operating subsidy. The biggest advantage of the Mass Pike routing is that it would go through Sturbridge, the logical jumping off point for a new route parallel to I-84, direct to Hartford, where it would connect to the existing Springfield-New Haven route. This would create a new inland Boston-New York City route via Framingham, Worcester, and Hartford, about 18 miles shorter than the Shoreline route via Providence. MassDOT has said that hybrid alternatives (combining pieces different alternatives for the three basic segments: Boston-Worcester, Worcester-Springfield, and Springfield-Pittsfield) would be considered in this Study. However, the report contains no analysis of this hybrid, although I strongly recommended it in my comments on each previous presentation of interim products of the Study. It appears that the project is being set up to fail. I propose that Massachusetts and Connecticut jointly study the concept of a new railroad between Sturbridge and East Hartford, about 29 miles. Some preliminary analysis of this was performed as part of the NEC Future Study. D. Phillips	Comment on Draft Public Report (October - November 2020)
DraftReport-49	Amber Smith		amberskys81@gmail.com	I live in Palmer Massachusetts it says the study has been going on for two years I've lived here for five in this is the first time I have heard of it it's now Nov. 13 2020!! My husband myself my parents and brother and sister all have season tickets to Fenway and we would absolutely love a rail stop In Palmer Massachusetts to go to these games!! Also I bet not unlike myself half of the Palmer residents don't even know about this! I'm going to ask every person that I know that lives in Palmer to see if they heard of this and I'll get back to you and let you know. The only reason I know about it is because the Palmer Journal Register gave out free papers to every resident on October 22nd 2020	Comment on Draft Public Report (October - November 2020)
DraftReport-50	Nathanael Nerode		ncn_politics10@fastmail.fm	Supplementary comment: This editorial from the Albany (NY) Times-Union newspaper editorial board tells you what you need to be studying! https://www.timesunion.com/opinion/article/Editorial-Hey-what-about-Albany-15723667.php	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-51	Benjamin Turon		bjturon@gmail.com	Dear Sir/Madame, Overall, I'm pleased with the alternatives presented by the East-West Rail Study – I think double-tracking the entirety of the existing formerly double-tracked Boston & Albany railroad now owned by CSX as laid out in Alternative 3 is the most expedient route going forward, providing the biggest bang for the buck. I'm not in favor of dedicated passenger tracks when clearly “higher speed” passenger trains and freight can share a upgraded double-track line, as seen across the world from the NYC-Albany Hudson Line to the West Coast Main Line in the UK. Major track realignments as put forward in Alternatives 4 and 4/5 should only occur if MassDOT or Amtrak purchases the CSX mainline Worchester-Springfield and ties in a curve realignment and grade separation rebuild program with electrification to enable through “Inland Route” service with the current New Haven-Springfield CTrail service extended to Boston and a number of Amtrak’s Northeast Corridor ‘Regional’ services traveling Virginia-Boston via the new Inland Route. As opposed to building and enacting a high-frequency corridor service from outset, MassDOT may also instead want to consider the approach adopted by Virginia, which has over the past decade had a program of adding one-at-a-time passenger train frequencies to routes already served by an existing Amtrak long-distance trains, a strategy requiring a smaller initial upfront capital investment compared to building an entire new high-frequency corridor at once. For example, Virginia in 2012 leveraged the existing Amtrak Washington-New Orleans ‘Crescent’ service over the freight tracks of the Norfolk Southern to extend an existing Boston-DC ‘Northeast Regional’ train to Lynchburg VA. With ridership and revenue above expectations and covering operating costs, Virginia is now working on extending a second Northeast Regional frequency to Lynchburg. Finally, any future follow-up study needs to examine Albany, NY as the logical terminal for a future East-West rail service through the Berkshires. At Rensselaer there is also an existing Amtrak crew base, maintenance facility, and currently an operating food service commissary – eliminating the need to build any of these facilities in Pittsfield. Albany-Rensselaer is also Amtrak’s ninth-busiest station, serving a metro region of over a million people, and providing connections to cities across New York City, Upstate NY, Vermont, Montreal, and Toronto. Including it would considerably boost ridership and revenue compared to a train terminating at Pittsfield – greatly improving the cost-benefit ratio at little additional cost in additional infrastructure. With all the questions, criticisms, and counterproposals that the East-West Rail study has generated, furthermore in-depth research and planning is warranted. I support white paper" on the governance, organization, and management of passenger rail within the Commonwealth, also a reexamination of ridership and cost/benefit estimates, and more detailed engagement with local businesses, Amtrak, CSX, and New York State. I hope that this study is not a dead end, another pile of paper to gather dust, but the end of the beginning in the process of bring high quality passenger rail service to the Boston-Springfield-Albany corridor. Benjamin Turon Ballston Spa, NY	Comment on Draft Public Report (October - November 2020)
DraftReport-52	William N Traylor		wtraylor26@aol.com	Train service between Pittsfield and Boston should be increased immediately. Such a step would give a real world test of the desire for this service. The steps necessary for this step to be taken do not seem to be insurmountable. Let's at least have something tangible come out of all of this discussion.	Comment on Draft Public Report (October - November 2020)
DraftReport-53	Dalton G Dwyer		dalton@industrycof.com	Would it be possible to discuss some of the economic and quantitative assumptions used in the study? There are a number of assumptions that, as an investment banker used to working with DCF, could be challenged, or at least a discussion of sensitivities on these assumptions might be included. I would be pleased to have a conference call of circa one-hour to review the issues in mind. Thank you, Dalton Dwyer	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-54	Steven E. Miller		semiller48@gmail.com	We really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail. In addition, MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	Comment on Draft Public Report (October - November 2020)
DraftReport-55	Peter Traub		phtraub@nycap.rr.com	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	Comment on Draft Public Report (October - November 2020)
DraftReport-56	Kyle pobieglo		kylepobieglo24@yahoo.com	I travel to Worcester an Boston daily an a train from Palmer would be amazing	Comment on Draft Public Report (October - November 2020)
DraftReport-57	Philip Orenstein		philip.orenstein@yahoo.com	Its a very impressive, well intentioned study. The final recommendation is based on a cost benefit analysis, while appropriate for this study, is driven by several highly subjective assessments and quantifications. However, certain facts are quickly evident, such as the high cost (\$2.5 - \$4.5 bln), ~65% of ridership is Springfield to Boston and the modest projected ridership. The harsh reality is that the tracks in this relatively low ridership area will cost the same (looking at the big picture) than those with much higher ridership between larger cities. While I would be delighted to use this service, at this point in time I would conclude that such a significant infrastructure investment is better directed towards newer, less expensive and more flexible technologies. This would include hybrid and ultimately electric bus service and the required charging capacity. This could be implemented faster and continuously modified to adapt to shifting populations and traffic patterns. This approach is less appealing in terms of highway traffic congestion, but the impact of COVID on commuting patterns requires a broader reassessment of these considerations.	Comment on Draft Public Report (October - November 2020)
DraftReport-58	Christopher Franks		ducknshover@gmail.com	I believe MassDOT should focus on immediate steps that would improve connectivity for western Mass. For instance, an additional round trip to Pittsfield in the morning and evening - to complement the existing daily Amtrak Lake Shore Limited - would be relatively simple and low cost, and I understand that detailed specifications for such a service are already being discussed among rail advocates and experts. I would like to see cooperation between all parties to implement this improvement as soon as possible.	Comment on Draft Public Report (October - November 2020)
DraftReport-59	M Linehan		mlenny123@msn.com	This West to East train travel is vital. Pittsfield was foolishly left out of connection to 90 a: when it was built b: when the state gave up on a bypass route(hurting North Adams as well). Isolation has kept this city struggling. Looking west see how well Albany is connected to everywhere...looking east Springfield has some connections while Worcester enjoys more. Western MA is only 100 miles from the Boston Harbor...why is it treated so poorly?	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-60	Tyler E Swanson		tswans1234@gmail.com	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans. Furthermore, MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Additionally, I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. I also want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail. Finally, I am concerned about two aspects of the financial analysis. First, the study discounts future costs and benefits at 7%, which is very high in terms of today's economic environment and market observable rates. In theory, the discount rate should have its basis significantly weighted in terms of costs of capital, which are at historic lows across nearly all investment activities. The discount rate used in the UK government's economic analysis for the HS2 line, for example, is 3.5%. I would like to see MassDOT provide a cost/benefit analysis using a range of discount rates, as a different and in fact more realistic rate could significantly enhance the viability of the project. In addition, in the table on page 101, the East-West line residual value (again discounted at 7% to a present amount) ranges from \$40 million to \$77 million, depending on the investment option developed. This amount seems low for what would then be a fully mature rail line. According to MassDOT, the residual future value represents 25% of the original cost of the East-West project. For instance, if the option selected had an original cost of \$2.0bn, the analysis assumes that in 30 years (2050) the residual economic value of the line is only \$500m. This amount is then discounted at the disadvantageous 7% rate. I believe that these numbers need to be revisited and revised to give a true picture of potential economic impact of East-West rail.	Comment on Draft Public Report (October - November 2020)
DraftReport-61	JUDITH BECHARD		judithbechard@comcast.net	There is almost NO public transportation in the town of Palmer. To get anywhere east or west of Palmer we need to drive there. Although the trains might not provide 'commuter for or all, if we are ever going to reduce pollution & commuter congestion we need to establish a better transportation infrastructure. Train travel is something we need to consider.	Comment on Draft Public Report (October - November 2020)
DraftReport-62	Sheila B. Irvin		sheilaanneirvin@gmail.com	want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-63	James Kupernik		james@vidmob.com	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to NYC, upstate New York, the Mid-Hudson region, Vermont, and Montreal. As a business leader in Pittsfield, this would make it easier to source talent from the capital region and have easier access to our headquarters in NYC The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	Comment on Draft Public Report (October - November 2020)
DraftReport-64	John Masiero		johnmasiero47@gmail.com	There was a time when General Electric employees in Pittsfield could take the train to Boston in the morning for a meeting/conference and be home again the same day. Today this would involve about five hours of driving and the expense of parking in that congested city. Light-weight electric rail could be a solution.	Comment on Draft Public Report (October - November 2020)
DraftReport-65	Lisa A Powers		powersbaker@hotmail.com	MassDOT should focus on immediate steps to improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost. I understand specifications are being discussed. I'd like to see all parties work to implement this and also work with New York on service to Albany, with Pittsfield as an intermediate stop. Albany is one of the country's busiest Amtrak stations, offering connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)
DraftReport-66	Brian Bissell		bbissell@berkshire.rr.com	Building climate-friendly infrastructure for the long term health of people and economies is a no-brainer I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)
DraftReport-67	Benjamin, Springfield Resident		ben.bland@live.com	I am a lifelong Springfield resident. I want to be able to easily take the train to Boston for leisure, shows, and nightlife (assuming those become a thing when the pandemic is under control). The Pike is annoying and I rack up a huge amount of mileage on my car, and the bus is not fast or convenient enough. We should have train service as an option for Springfield Residents. We already have to go east for everything else - people go east for work, education, restaurants, nightlife, etc. There are just more amenities out East because central and Eastern Mass have become so well developed and Western Mass is still more rural/suburban/xurban. We want easier access to those amenities. I would take the train on weekends if I didn't have to drive. If the commonwealth has to be culturally so Boston-centric then those of us out west want to be able to participate	Comment on Draft Public Report (October - November 2020)

DraftReport-68	Steve Strauss	Rail Passengers Association, NYS Council Representative	straussnyc@verizon.net	www.railpassengers.org Thank you for the opportunity to comment on MassDOT's East-West Rail Study. The document represents an informative first step with good documentation of existing conditions, understandable maps and tables and identification of three reasonable alternatives. The Study does a good job of breaking the project into the three logical and distinct segments (BOS to WOR; WOR to SPG and SPG to PIT) and explaining the particular situations, options, costs and travel times for each segment. That said, MassDOT and their primary consultant, WSP, seem to have set up the study, to examine the costs and benefits of expanding east-west passenger rail service, so as to portray the idea in the worst possible light. Two primary decisions by MassDOT result in seemingly high capital costs and low ridership creating low cost-benefit scenarios for improving passenger rail service. First, MassDOT established the western terminus of the study in Pittsfield, a city of 44,000 people rather than Albany, NY, a city of 97,000, in a metro area of well over 500,000. Albany is the 10th busiest Amtrak station in the United States and has passenger rail connections to New York City, Chicago, Montreal, Rutland (VT) and Toronto. In addition, the Albany-Rensselaer station has existing train storage, maintenance facilities, crew quarters and a commissary that could be made available for expanded service to Boston at a likely lower cost than building new facilities in either Springfield or Pittsfield. Extending Massachusetts East-West service an additional 38 miles to Albany provides greatly enhanced network connectivity and a much larger terminal ridership market for trip origins and destinations. It is critical that New York State DOT's Rail Division be brought into this effort. Second, MassDOT has presented the full build-out costs of each alternative without acknowledging that most states take a much more incremental approach to improving intrastate and interstate passenger rail service. If you look at two very successful state-focused expansions of passenger rail – North Carolina's Piedmont service between Raleigh and Charlotte and Maine's Downeaster, both have had significant initial capital costs, but both have expanded incrementally, growing service and making additional capital investments in line with growing ridership over an extended time period. The study demonstrated that the cost projections are in-line with what the Commonwealth is experiencing on other rail corridor improvement projects. MassDOT should have provided a more positive tone to the study and included Albany as the western terminus to have presented a more realistic picture of how to expand passenger rail service across the Commonwealth. Governance and Operations Discussions of how the Commonwealth might initiate and/or operate expanded east-west passenger service omitted or downplayed expansion of a Rail Division within MassDOT. Rail divisions are a fairly common practice for states with PRIIA Section 209 state-supported Amtrak service. North Carolina and Michigan oversee extensive state supported passenger service operated by Amtrak. Connecticut uses a third-party operator overseen by Connecticut DOT for CT Rail. Massachusetts DOT currently participates in the Section 209 State-supported trains program as well as the cost-sharing arrangements of Section 212 pertaining to the Northeast Corridor. Accordingly, in the short-term, MassDOT could add a second daily round trip between Albany and Boston operated by Amtrak and funded by the Commonwealth through the Section 209 program. While Amtrak is a high cost provider, this is the fastest way to respond to the interest of Western Massachusetts in having greater connectivity with the Boston area. This approach also requires negotiation with CSX Transportation. Housing Costs and Other Economic Benefits The report acknowledges that more work needs to be done to identify the economic benefits of enhanced east-west connectivity through frequent passenger rail service. Similarly, more work needs to be done on how the high cost of housing limits economic growth in the Boston area and how reductions in travel time between Worcester and Boston	Comment on Draft Public Report (October - November 2020)
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				and perhaps Palmer and Boston could expand the availability of affordable housing by expanding the Boston commuting shed. This is a real, measurable benefit that should be considered in the next stages of this project. Suggested Enhancements to This Study or Future Studies/White Papers 1. Formally bring New York State DOT into the planning process. 2. Develop more incremental approaches to implementing one of the 3 recommended options. 3. More clearly state the assumptions on high and low level platforms for each station. (Unfortunately, CSX generally restricts high level platforms in mixed freight and passenger use territory.) 4. Detail station parking assumptions associated with ridership forecasts. 5. Introduce discussion of fare revenue to meet operating costs. The Commonwealth of Virginia is meeting it's "above the rail" operating costs from fare revenue for state-supported extensions of NEC Regional train service in several corridors. 6. Provide more details on 10% transfer assumptions to CT Rail and identify transfer assumptions in Boston to NEC service and the Downeaster. 7. In funding options, note that FRA Federal-State Partnership for State of Good Repair Program is generally only available for use on publicly-owned assets and those not in a State of Good Repair. 8. In funding options, note that the BUILD grants program operates at the agency level and is not specific to any U.S. DOT administration (FTA, FRA or FHWA).	
DraftReport-69	Tracy Ducasse		interlace8@gmail.com	It would be wonderful to have a rail system that stopped in Palmer, it would cut down exhaust polluting the environment. It would be great to take the train into Boston, and go points further from there. I was an extensive traveler before Covid, and have always used public transport where ever I have been. If places like the UK can have a train system that benefits rural areas, why can't we. It would be a great asset.	Comment on Draft Public Report (October - November 2020)
DraftReport-70	Paula Geier		saintpaulas@gmail.com	Worked in inspection for Csx	Comment on Draft Public Report (October - November 2020)
DraftReport-71	Jim Brown		jobrown773@gmail.com	I believe the long-term material, human, and environmental benefits of statewide passenger rail will far outdistance any upfront costs. Especially if much of the track is already laid. It appears to me that any CSX conflicts will be resolved over time through experience and planning. Transit will benefit in having alternatives, and people's quality of life will improve by lessening the attachment to the automobile. Finally, the economy will be stimulated via increased movement of goods (non-CSX) and people.	Comment on Draft Public Report (October - November 2020)
DraftReport-72	Anezka Sebek		sebeka@newschool.edu	I don't live in MA but I do live in Kingston, NY. I have been frustrated with the lack of rail service on the West Coast of the Hudson. The reason the East Coast counties are wealthy is because of the rail line there. To meet the END OF FOSSIL FUEL in the US in ten to twenty years, we have to rebuild our RAILWAY INFRASTRUCTURE. It will save money for people to commute AND it will prevent pollution. We need an electrical grid powered by wind and sun to drive the trains...then we will all make the planet more liveable.	Comment on Draft Public Report (October - November 2020)
DraftReport-73	Katie Challinor		katie.e.challinor@gmail.com	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	Comment on Draft Public Report (October - November 2020)

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DraftReport-74	Karen Christensen		karen@berkshirepublishing.com	I am troubled by two aspects of the financial analysis. First, the study discounts future costs and benefits at 7%, which is very high in terms of today's economic environment and market observable rates. In theory, the discount rate should have its basis significantly weighted in terms of costs of capital, which are at historic lows across nearly all investment activities. The discount rate used in the UK government's economic analysis for the HS2 line, for example, is 3.5%. I would like to see MassDOT provide a cost/benefit analysis using a range of discount rates, as a different and in fact more realistic rate could significantly enhance the viability of the project. In addition, in the table on page 101, the East-West line residual value (again discounted at 7% to a present amount) ranges from \$40 million to \$77 million, depending on the investment option developed. This amount seems low for what would then be a fully mature rail line. According to MassDOT, the residual future value represents 25% of the original cost of the East-West project. For instance, if the option selected had an original cost of \$2.0bn, the analysis assumes that in 30 years (2050) the residual economic value of the line is only \$500m. This amount is then discounted at the disadvantageous 7% rate. I believe that these numbers need to be revisited and revised to give a true picture of potential economic impact of East-West rail. I also want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	Comment on Draft Public Report (October - November 2020)
DraftReport-75	Karen Christensen		karen@barringtoninstitute.org	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans. To make this happen successful, MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. In addition, MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	Comment on Draft Public Report (October - November 2020)
DraftReport-76	Rachel Lucy Christensen		RACHELL.CHRISTENSEN@OUTLOOK.COM	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)
DraftReport-77	Nicholas Russo		nrusso93@gmail.com	Thank you for your time in taking on this important study. As a native of Berkshire County, having a non-automotive transportation option to connect to the rest of my state is very important to me. With Amtrak service now reduced to three days per week, the options are now limited further. Peter Pan and Greyhound remain alternative options, though they do not improve on travel times compared to the Mass Turnpike. The one aspect I would very much like to see considered is a connection through Pittsfield to Albany, rather than a terminus at Pittsfield. With a population of 100,000 and multiple Amtrak connections to downtown, the Empire Corridor, and Canada, Albany would provide a large boost to any cost/benefit considerations of East-West service. I am not sure why this scenario was not considered in this initial study, but it is not too late. A rail connection between two state capitols would be a boon to ridership, and help provide more revenue to cover costs of service to less profitable stations. I ask you to please consider this scenario in the study alternatives, even if it means extending the study or comment period. It think it would be worth the investment. Thank you!	Comment on Draft Public Report (October - November 2020)

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DraftReport-78	Charles O'Brien		charles.h.obrien@gmail.com	We desperately need more high speed rail as an answer to global warming. I would use the East-West rail at least a few times a year. I currently live in Boston.	Comment on Draft Public Report (October - November 2020)
DraftReport-79	Martha Klein		Martha.klein@sierraclub.org	I own an apartment in Great Barrington MA. Taking the train to Boston from Pittsfield is the greatest thing, but is not super convenient right now. I would travel by train frequently to Boston and NYC, because driving is costly and inefficient. MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Trains are an ideal form of transportation that can help us meet our greenhouse gas reduction targets. I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	Comment on Draft Public Report (October - November 2020)
DraftReport-80	Stephen Benedetti		stevil666@yahoo.com	I think a rail stop in Palmer could greatly benefit the economy of this often overlooked part of the state.	Comment on Draft Public Report (October - November 2020)
DraftReport-81	Melanie Drewnowski		msroxi02@yahoo.com	This would have many layers of benefits from work opportunities, extracurricular, educational while also increasing revenue for Boston plus decreasing emissions.	Comment on Draft Public Report (October - November 2020)

DraftReport-82	Ben Hood and Anne Miller	Citizens for a Palmer Rail Stop	palmertrain@gmail.com	Submitted by Citizens for a Palmer Rail Stop 11/19/20 In June 2020, Secretary Pollack expressed the hope that the East-West Passenger Rail Study would lay the groundwork for moving the idea of higher speed rail between western Massachusetts and Boston by way of Worcester from a study to an actual project. As the study concludes, MassDOT should be looking for a way to create a shovel-ready East-West rail project at a time when the Federal government is likely to develop an infrastructure bill to stimulate the economy and make much-needed improvements to the country's transportation systems. Unfortunately the current East-West Passenger Rail Study alternatives are unlikely to qualify for Federal funding due to their high cost and reputedly low benefit, resulting in minimal benefit cost ratios. All that is needed to create an East-West rail project eligible for Federal funding is to revisit and revise the Northern New England Intercity Rail Initiative (NNEIRI), released by MassDOT in 2016. The NNEIRI study provides a blueprint for affordable, higher speed train service between Boston and Springfield. MassDOT should take the NNEIRI plan off the shelf, revise it to extend service west to Pittsfield and Albany, and make it a shovel-ready project that is fully qualified for Federal funding. We encourage MassDOT to develop a "New NNEIRI" project to address the great need of Massachusetts for frequent train service running west from Boston to Springfield and Pittsfield, and connecting to north-south service at Springfield, and to UMass/Amherst and UConn/Storrs via bus and future train service at Palmer. Here are specific ways in which a "New NNEIRI" project could improve on the East-West Passenger Rail Study alternatives: 1. The population of Worcester is 185,428 (metro area pop. 923,672), and the population of Springfield is 153,606 (metro area pop. 631,982). They are the 2nd and 4th largest cities in New England. It is outrageous that these two cities are barely connected by passenger rail in the 21st century. MassDOT should make it the highest priority of a shovel-ready "New NNEIRI" project to implement frequent train service between Springfield and Worcester. 2. To benefit the entire Commonwealth, a "New NNEIRI" project should extend intercity passenger rail to Pittsfield (city pop. 42,142), and Albany, NY (city pop. 96,460; metro area pop. 883,169). The added connection to Albany will more than justify the additional cost of service west of Springfield. 3. We appreciate the inclusion in the East-West Passenger Rail Study of infill stops in Palmer and Chester to connect the vast rural areas of Central Massachusetts and the Hilltowns to all the cities west and east. Every train in the NNEIRI plan would have stopped in Palmer; and every train in a "New NNEIRI" project should stop in Palmer and Chester. 4. A "New NNEIRI" project should include plans for temporary bus and subsequent rail connections to the Flagship Campus of the University of Massachusetts in Amherst, and to the University of Connecticut in Storrs, both of which will be served by direct connection at the east-west stop in Palmer. UMass Amherst: 24,209 undergraduates; 7,141 graduate students; 1,462 faculty and 4,741 staff. UConn: 18,847 undergraduates; 7,097 graduate students; 9,620 faculty and staff. 5. Demands for "high speed rail" in effect derailed the original NNEIRI plan (itself originally a high speed study), delaying rail service to Springfield well beyond 2020, the year in which NNEIRI-envisioned service could have begun. No question the United States should be building high speed rail networks nationwide, but in Massachusetts higher speed rail now can lead to high speed rail later. A "New NNEIRI" project could start train service with speeds less than 90 mph in order to reduce the much greater capital expense required to reach true high speed service using the CSX right-of-way. By starting with less costly, "higher speed" service, MassDOT will be able to better evaluate the need for train service along this route before making an enormous capital investment. 6. The East-West Passenger Rail Study narrows the scope, low-balls the ridership, inflates the costs, and underestimates the benefits of passenger rail service between Boston, Springfield, and Pittsfield. A "New NNEIRI" project would address all of these failures by expanding the scope to include Albany, NY; by basing ridership projections on more comparable proxy markets elsewhere in the U.S.; by reducing capital costs to cover only	Comment on Draft Public Report (October - November 2020)
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				improvements needed to run less than 90 mph trains west of Worcester; and by calculating and including in the benefit/cost analysis all of the economic and environmental benefits that will accrue from expanded, frequent train service spanning our state. A “New NNEIRI” project will require oversight and planning to realize its full potential by connecting to regional and interstate public transit services. As a first step, the legislature and MassDOT should create a passenger rail authority to coordinate and develop statewide passenger rail service on the Inland Route, the Knowledge Corridor (home to the Valley Flyer pilot service), the Northern Tier, the Central Corridor Line, and the Housatonic Line. The authority could also collaborate with CTDOT, NYSDOT, and VTrans to ensure seamless connection to passenger trains running across our borders. Ben Hood and Anne Miller 60 Buckland St. Palmer, MA 01069 413-283-2141 Citizens for a Palmer Rail Stop http://www.palmertrain.org palmertrain@gmail.com	
DraftReport-83	Dan Gagner		dwgagner@gmail.com	This would be such an incredible opportunity for the state to expand west. I've worked for 8 years commuting from Palmer to Boston Children's Hospital. This would be a game changer for me.	Comment on Draft Public Report (October - November 2020)
DraftReport-84	Elise Lennon		eliselennon@yahoo.com	Rapid and frequent East-West rail travel is essential for the economy of Western Massachusetts, and will also provide much easier access for tourism travel to Boston from Western Mass.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-85	Tom Hutcheson		thutcheson111@gmail.com	Broaden Cost-Benefit Considerations November 19, 2020 Thank you for the opportunity to comment on the East-West rail line study. This comment calls on the Commonwealth to produce a comprehensive infrastructure plan and to advocate in Congress for a change to the current reliance on solely financial cost-benefit analyses, as they are detrimental to the public interest. I urge the Commonwealth to produce a comprehensive and integrated transportation plan designed to channel infrastructure development into forms suitable for the long term. Having individual projects stand or fall without considering their place in an overall long-term policy and plan is inefficient and a poor use of taxpayer dollars. The Commonwealth is a whole, and decisions made with smaller perspectives are not helpful in the larger term, which is after all the province of public policy. Infrastructure development means not only transportation infrastructure, but transportation within the larger economic, social, and ecological environments. Projects that benefit multiple goals can and should be prioritized over projects that are designed to solve only smaller problems. The world is complex, and the “siloing” of issues is counterproductive to good public policy. This project (no doubt among many others) provides an opportunity to break out of that habit of thinking incorporate broader goals. The benefits of such planning must be measured in terms of meeting multiple policy goals, not simply financial cost. While some may see this as a luxury not provided the private sector, it is a necessity for public investment, as the efficiency of meeting multiple public policy goals is a different kind of efficiency from getting a low bid for a particular product. The goals of increased housing availability, job opportunities and broader economic development, rural equity, and mitigating climate change are all assisted by greater rail transportation. Ridership estimates, even for several years out, measure just a small part of the benefits of an expanded rail system—of which this project is only one part, if a necessary one for the southwestern part of the state. To further reduce those estimates of a partial benefit by not including induced ridership is to willfully blind ourselves to the greater range of benefits. Similarly, without including the benefits of avoided carbon emissions, job site flexibility, and access to affordable housing (to name only some of the factors that should be included in a comprehensive policy), any solely financial cost-benefit analysis, while a necessary part of the plan, is short-sighted in today's world of integrated solutions. I understand that the Commonwealth relies for major transportation projects on funding from a federal system that mandates such an analysis and insists on limiting assistance to those projects proving financial benefits. It is therefore essential that the Commonwealth work with its representatives in Congress to change this myopic perspective. I am copying my Representative and Senators on this comment and request that those considering these comments urge the Commonwealth to make the same argument to the Massachusetts delegation. Still, unless the Commonwealth is serious about addressing the ecological and social dimensions of sustainability (which includes economic development), relying on such cost-benefit analyses as those made in this study will not be sufficient to protect itself and it citizens. I doubt that all benefits can be monetized. As demonstrated by this study, acting in the public's short-term financial interest can and will do more harm than good to the public's long-term economic and ecological interests.	Comment on Draft Public Report (October - November 2020)
DraftReport-86	Megan Whilden		marvelousness@gmail.com	I want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-87	Monk Schane-Lydon		monk@monksvoice.com	Ultimately, for me, the train has to be about saving time and convenience. It takes me 2.5 hours to drive to Boston, and I can then go wherever I want in the city. If the train can get me there in under 2 hours, I'm interested. Especially for the ride back. If I take the train to Springfield, I'd want transportation from there to sites in the area. I wouldn't want to be dumped at the train station, with no way to get to the mall. The train should be a faster, cheaper alternative to get from A to B. Anything less is a waste of time.	Comment on Draft Public Report (October - November 2020)
DraftReport-88	Cricket Saurel		saurel@bcn.net	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. I also feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)
DraftReport-89	Jeffrey Nathan		jeff@jnlld.com	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Sincerely, Jeffrey Nathan	Comment on Draft Public Report (October - November 2020)
DraftReport-90	Rosemary Starace		rosemary.starace@gmail.com	Investment in passenger rail should be given priority as Massachusetts develops plans to address climate change. Transportation now contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy. Expanded passenger rail service is a necessary part of both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. The MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)
DraftReport-91	Charles Kenny		ckennymd@gmail.com	I believe the first effort should focus on high-speed freight trains bound for the mid-west and west. Capturing more of the container market would improve Boston's port standing, give Pittsfield an opportunity to manufacture high speed rail equipment, and set the stage for later, less profitable passenger traffic.	Comment on Draft Public Report (October - November 2020)
DraftReport-92	John R Schreiber		john.schreiber8@gmail.com	The western part of Massachusetts is economically depressed and cut off from the rest of the state by lack of transportation and inclusion in regional NY State cable news as opposed to Massachusetts. Establishing an east west transportation corridor will re link the state together, encourage economic growth and provide lower cost housing to the Boston Metro area. A complete win-win.	Comment on Draft Public Report (October - November 2020)
DraftReport-93	David V Walker		dvwalk@gmail.com	We really need this train in Massachusetts! All the way to Pittsfield! Maybe eventually even to Albany. Fastest options should be prioritized! Relieve the pressure on the Boston housing market! Revitalize the economy of western mass! The berkshires are beautiful, and doing this project will bring in loads of visitors and tourists and artists and the like. Add the housatonic railway as well!	Comment on Draft Public Report (October - November 2020)
DraftReport-94	Lisa Andersen		land444@gmail.com	Having seamless rail access to Boston from the Berkshires provides a vital connection that would help stabilize the economic health of Berkshire county. Drawing visitors from the Boston and east coast allows Massachusetts to keep more of its disposable income in-state, and provides greater reach for the many small businesses that reside in the Berkshire region. The housing market would also grow. This is an important piece of infrastructure that helps to grow the greater state community.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-95	Kristin Hatt		samhatt@earthlink.net	The East/West rail service must extend from Investing in infrastructure for a train that goes from Boston through the Berkshires all the way to Albany to create the most efficient and ultimately productive and successful transportation system for the citizens of the commonwealth to grow together, seems to be a common sense approach to the 21st century problems we face. To reduce the number of cars on the road on a given day in the cities, but make them accessible to the citizens who need to visit, ease the highway congestion and emissions that causes, and reduce the stress of travel. Most importantly the East/West Rail will allow other communities outside of Boston and Worcester to benefit from the economic growth that a well planned mass transit system creates like a pipeline. Western Massachusetts, including the Berkshires, needs to be plugged into this pipeline.	Comment on Draft Public Report (October - November 2020)
DraftReport-96	Barbara Palmer		ABPALMER2@GMAIL.COM	Thank you for the thorough study on East-West Rail, and for the opportunity to comment. As a long-time resident of the Berkshires I am an eager supporter of infrastructure initiatives that further smart growth in our beautiful region and make it possible for the Berkshires to be vibrant economically in addition to being a cultural and outdoors mecca. Future generations need places to live and work away from the coast. Mass transit has to be part of that infrastructure. Mass transit is a component of addressing climate change in addition to accessibility. In the high-population northeast we must have foresight in planning infrastructure away from the coast. Rail is a long-term solution for those dual challenges -- climate and accessibility -- and one that is used in most developed countries to great positive effect. I was shocked that the presentation showed a negative impact of the rail project on air quality. The speaker explained that the engines run quite dirty. While electrifying the line may not be feasible, investing in high-efficiency, clean technology is key. Our cars, airplanes and airports are not 50 years behind the rest of the world, and our rails shouldn't be either. I am disheartened that the plan did not make a recommendation to move forward. On climate change and on the regional economy, we don't have time to lose. Please invest in our future with state-of-the-art rails now. It is an investment that has a long life, and our children will be grateful for our foresight and care.	Comment on Draft Public Report (October - November 2020)

DraftReport-97	Andrew Jennings		aaajennings@aol.com	After reviewing the East-West Study Draft Report I realized how timid it was. Recommendations were few and most decisions were punted until further research was done. Much of the additional research could have been included within the scope of this study. This timidity may result in the consignment of this study to a shelf to gather dust. Being overly cautious kept ridership estimates and benefits low, likely overestimated costs, and slowed any implementation of the service. The stated central question of this study is “How can we connect people in western Massachusetts with central and eastern Massachusetts using a passenger rail service that provides fast, frequent, attractive service in a cost-effective and achievable manner?” With this central question in mind, only alternatives for trains operating between Pittsfield and Boston were studied. Bold consultants would have quickly recognized that such an operating plan would likely not be as cost effective as a service between Albany / Rensselaer and Boston. Such a service would not only open up markets by connecting to the existing Amtrak Empire Service (including the market to be served by the proposed Berkshire Flyer) it also holds the potential for significant cost savings because Albany / Rensselaer has service facilities, a crew base, and the potential for equipment sharing that would not have to be duplicated at Pittsfield or Springfield. The East-West study should have included at least a preliminary review of this option. Another area where the study was timid was it apparently used CSX’s engineering standards for shared track to develop what changes were required for passenger trains operating in certain speed ranges. Those standards did not appear to be independently reviewed for their reasonableness nor was any account made of the benefits such changes would bring to CSX’s operations were considered. Such acceptance likely increased projected costs. I understand why the Downeaster and the Hartford Line were used as proxies to project ridership. But I wonder if those proxies understate the potential ridership as the Berkshires have unique cultural attractions that adds to the potential ridership. Certainly, if the operator of the service can add Friday night and weekend surge capacity the proxies likely understate the potential ridership. This project has a number of potential partners who should be interested in sharing the ridership increases that come from the improved network connectivity, and who should be interested in the cost efficiencies that can come from sharing facilities and equipment, and from improved utilization of fixed facilities. The potential benefits from partnering with MBTA, Amtrak, or CT rail were not highlighted. Bringing Massachusetts together with East-West passenger rail service has benefits beyond the transportation benefits calculated in the study. For international travelers beginning or ending their journeys in the Berkshires, Logan Airport competes with Port Authority airports. Western Massachusetts residents seeking the expertise of teaching hospitals now are indifferent to hospitals in the Boston area or in New York City. The Berkshires would attract more visitors from eastern Massachusetts if better non-auto transportation options were available. East-West rail would make Massachusetts more competitive. Feeder bus service may enhance the proposed service. Although preliminary alternatives 1, 2, and 5 which had all East-West rail passengers traveling west of Springfield transferring to bus did not make sense, specific markets might work better with a bus transfer. Specifically, passengers with an end of their journey in Lee or towns south of Lee could have a faster trip using a feeder bus to Springfield or Palmer as they would not have to travel all the way to Pittsfield to catch the train. Similarly, a feeder bus from Amherst to Palmer might be advantageous to travelers. The impact of an integrated bus /rail network was not explored in this study. Decision makers should also keep in mind that East-West rail has synergies with other projects designed to expand the passenger rail network. East-West rail would complement restoration of rail passenger service on the Housatonic Line. Not only would some passengers connect between the two services, but the first / last mile infrastructure developed for one service would be used by passengers utilizing the other. Similarly, plans to extend a Downeaster service to New York City become easier to implement if passenger rail service exists on the Boston and Albany route between Springfield and eastern Massachusetts. I believe that an East-West passenger rail service has far better potential than this draft study indicates. The benefits are understated, and the costs are overstated. Ironically, the pandemic has created an opportune time to quickly implement a variation of preliminary alternative 3. Rail freight volumes are down, and Precision Scheduled Railroading has been implemented making more slots potentially available that could be used for passenger service. With revenues down, CSX should be looking toward additional revenue to keep its operating ratio in line with investor expectations. Track rental payment from passenger service could provide some such revenue. Rail passenger volumes are much lower than they were pre-pandemic, potentially allowing existing locomotives and cars to be used for an east west service even with additional social distancing on existing services. If the Commonwealth were to act boldly and generate excitement for this project with potential partners ranging from New York State to the MBTA, it is conceivable that a pilot East-West passenger rail service could be operating as a	Comment on Draft Public Report (October - November 2020)
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ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
				COVID-19 vaccine is rolled out to the general population. Let's be bold. Let's put people to work building a better rail passenger network in Massachusetts. 1) Even this question is timid as it minimizes the desire of those in central and eastern Massachusetts to access western Massachusetts	
DraftReport-98	Massachusetts Sierra Club		clint@massachusetts.sierraclub.org	The Massachusetts Sierra Club simply urges you to commit to East-West Passenger Rail and to develop and implement a plan to achieve it as soon as possible. Our highways are operating at overcapacity. Massachusetts is home to the first, second and fourth largest cities in New England all of which are located along the congested I-90 corridor. Yet vehicles are the overwhelming mode choice along this route because other mobility options barely exist west of Worcester. Worcester and Springfield must be well connected by rail for reasons of equity and economic development. Finally, given the enormous volume of travel on the Mass Pike, we should be using this project as an opportunity to help meet the Global Warming Solutions Act by reducing intercity travel by private vehicles. The Draft East-West Passenger Rail Study has so many limitations that it is not a strong basis for making a decision. It would have been better if the East-West Study had more closely resembled the Northern New England Intercity Rail Initiative (NNEIRI). The Sierra Club instead suggests that you reverse the goal and find a solution with a combination of ridership and costs that will make the project's Benefit-Cost Analysis sufficiently attractive to the US DOT so that it will receive approval for Federal funds. This could be done through a wide range of options that could include: • Include ridership synergies with other routes such as the Vermonter, Hartford Line, Valley Flyer and Berkshire Flyer. • A marketing plan to increase ridership. • Extend East-West service to Albany, which would enable travellers from Boston to Pittsfield to enjoy numerous new destinations such as Montreal to the North, Buffalo and Toronto to the West and New York City to the south. • Improve the Worcester Line to reduce the trip time and increase ridership on the East-West service (e.g., triple-tracking, level boarding, electrification). These costs should not be allocated to this project since these improvements should already be done for MBTA regional rail. • Phasing of the implementation. • Benefits of infrastructure improvements to existing Amtrak service starting with the Lake Shore Limited and to restoring the Inland Route via Springfield and Hartford that was dropped in 2004. The Boston-Springfield segment should be developed as the first leg of an alternative spine for the NEC as was outlined in the NEC Future study. • Add a station in Westfield that can serve that important Western Massachusetts city and can also serve much of the Berkshires if part of a first phase. • State acquisition of all or part of the right of way to better control costs and service. • Improvements to RTA services that feed into East-West service to increase ridership. • Adding Housatonic service to build out the state rail network and increase mobility options via Pittsfield. • Quantification of benefits to freight service if passenger service runs in its own right of way. • Finally, if the goal is truly "East-West" service for all of Western Massachusetts then this should include the Northern Tier route as well. The time is right for trains because the next Presidential administration will be even more supportive of passenger rail. Rail projects have a long lead-time; now is the time to be planning for the future.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-99	Nicholas McGee		nmcgee21@yahoo.com	This is not a "go big or go home" scenario. The study shows 3 of the most expensive options, being implemented immediately. This does not need to be the case. Phasing is a great way to get something started and watch it grow. This will also help quiet the skepticism shown in the report on ridership and development in the affected towns and areas. And with a new federal administration who is historically in favor of infrastructure AND rail projects, there could be a lot of opportunity for federal help with the cost. Boston is a big region, and it typically gets the larger end of the wishbone when the statehouse is dealing out things. The East-West rail project could help both of these problems simultaneously as well. By allowing for frequent travel between places like Palmer and Springfield to Boston, those who work in Boston but cannot afford it can move to any town along the transit line, as numerous people have already along many of the commuter lines of the MBTA. This relieves congestion in the city itself, grants access to those in Western Mass who otherwise would not have it, and allows for growth in the spine of this connecting region between Eastern and Western Mass. Lastly, I think an independent study would greatly benefit the idea of an East-West Rail corridor. Having a team picked by Baker and his administration when he has clearly not put any clear thoughts into transit and has cut funding significantly, was a sure-fire way to have the team come back with this study's response of recommending another study and pushing the responsibility even further. An independent study by a group or organization with no claims to or stake in this project would be helpful to find out more accurate numbers on cost, revenue, and even emissions (I find it hard to believe that there will be more emissions with a rail system in place than there are currently, for example). In conclusion, I am a bit disappointed in the study's inability to look towards the future and see the long-term benefits of implementing such a system in the Bay State. The benefits and the promises of development, inter-regional connectivity, and a secondary route from Boston to NY far outweigh the negatives presented.	Comment on Draft Public Report (October - November 2020)
DraftReport-100	Dominick Villane		dominickvillane1@msn.com	Dear Mass DOT, Please know how important a West/East rail link is to the economic sustainability for Western Mass. Today it is impossible for us here in Western Mass. to leave here in the morning to attend important hearings on Beacon Hill and return home in the evening. I hear over and over it is too expensive to build. Truth is it will be too expensive not to build. We have a rare opportunity with our Senior Congressman Richie Neal sitting as Chairman of the Ways and Means Committee. Time will show this is the time for strong leadership to make this happen. Innovation and Technology will also help advance travel and and keep costs down. Thank you for considering this comment and plea.	Comment on Draft Public Report (October - November 2020)
DraftReport-101	Carlene Tavares		lenoxpandm@gmail.com	Western Mass is the best kept secret - please help the East coasters discover - all the treasure nestled in the Berkshire Hills	Comment on Draft Public Report (October - November 2020)
DraftReport-102	Ben Sands		bfs43@cornell.edu	I think east west rail is a fantastic idea and we should prioritize making this train go as fast as possible so it will be a viable alternative to the mass pike. I also think it's silly not to consider extending this to Albany, which is a huge market and would increase ridership. Also this would allow connections to NYC, Montreal, VT, etc. Thanks for reading, Ben Sands Somerville Mass.	Comment on Draft Public Report (October - November 2020)
DraftReport-103	Matthew Sanchez		mattsanchez1018@gmail.com	East west rail is essential for the growth and development of all Massachusetts. Incorporating this development with the adding of third track express line from Worcester to Boston.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-104	David Guenette		david.guenette@gmail.com	The conclusions of current East-West Rail Study lack three characteristics: Intelligence, Ambition, and Imagination. The Alternative No. 6 is closest of the six outlined plans, but the failure to anticipate and consider other rail connections—of which Pittsfield to NYC or Housatonic Line is foremost—shows a relatively short-term frame of mind. Build out of infrastructure required building on active imagination and a willingness to think long-term. A guiding principle must be the significant reduction of automobiles and the alternative of an integrated transportation system that supports people moving about without requiring the ownership of personal automobiles; large cities (e.g., Boston) have pervasive public transportation (although in need of better investment and infrastructure development), but the further out west one goes, the absence of pervasive public transportation clearly is a major contributor to the study's projected low ridership numbers. People need to get to the stations, but if they otherwise are forced into car ownership, their use of personal cars will continue. People—even those in large urban areas, but even more so beyond the borders of the biggest cities in Massachusetts—are economically oppressed by their need for personal automobiles due to the cost of purchase, maintenance, insurance, and fuel. A comprehensive passenger transportation can lessen this astonishingly high cost to individuals and thus freeing up personal resources for other important improvements within our economy and society. The fastest passenger rail service between Pittsfield (and connecting on to Albany and thus points west and connecting to NYC) and Boston is the best of these proposed plans, but even this plan is a significant failure of imagination. In twenty years' time, improvements in technology will support autonomous electric vehicles that can be hired locally on an as-need basis and intercity rail is well-suited for long distance travel. Constraining plans to relative short-term timeframes contributes, no doubt, to the lack of imagining a better future, as does the short-term investment/payback mentality plaguing our country. Please do better. The place to start is the best of your plans, Option 6.	Comment on Draft Public Report (October - November 2020)
DraftReport-105	Toby Butterfield		tobymjbutterfield@yahoo.com	I wish MassDOT would look at the bigger picture and the benefits that flow from making transportation regional. Boston to Albany service, with Worcester, Springfield and Pittsfield as intermediate stops, would be a boon to central and western MA and their business and tourist sectors. Albany's population of nearly 100,000 and its Amtrak stations would allow connections to upstate New York, the Hudson Valley, Vermont and Canada.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-106	Daniel Cantwell		danielhcantwell@gmail.com	To the Massachusetts Department of Transportation Thank you for allowing me to comment on the East West Passenger rail study. I live and work in New York State, but I have strong connections to the Commonwealth of Massachusetts and I visit and do business here often. I believe increased rail service to Western Massachusetts, with extended service to New York State, should be high on the list of transportation priorities for MassDOT. In May of 2019 I traveled to Boston via Albany using Amtrak's Empire Service and the Lake Shore Limited. The fare was competitive (low), and it was an enjoyable, although long, trip. MassDOT should focus on immediate steps and provided an additional daily round trip to Albany via Springfield/Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited. This would be simple, low cost, start. I understand that detailed specifications for such a service are being discussed among rail advocates and experts. The Albany - Schenectady - Troy Metropolitan Statistical Area in USA is an intercity anchor with a population of over 800,000 and Albany is one of the country's busiest Amtrak stations, offering further transport connections for MA residents between upstate New York, the Mid-Hudson region, Vermont, and Montreal and Massachusetts. Extending East-West service the additional 38 miles to Albany provides greatly enhances network connectivity and a much larger terminal ridership market for trip origins and destinations to Western MA. Albany/Rensselaer station also has established train servicing facilities which could be used through leasing agreements rather than building new. That is why it is critical that New York State DOT's Rail Division be included to work in this effort. Finally, given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans. Thank you, Daniel H. Cantwell, Registered Architect, Owner, DHC Design	Comment on Draft Public Report (October - November 2020)
DraftReport-107	MARYJANE DUNLOP		sellu1@aol.com	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	Comment on Draft Public Report (October - November 2020)
DraftReport-108	MARYJANE DUNLOP		sellu1@aol.com	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-109	Travis Pollack	Metropolitan Area Planning Council, Senior Transportation Planner	tpollack@mapc.org	Thank you for the opportunity to review on the draft report, and we appreciate the opportunity to serve on the advisory committee for the East-West Passenger Rail Study. We offer the following comments on the draft report. The study found that, while the alternatives could reduce rail travel times from Boston to Pittsfield by more than one hour, the high projected capital costs make implementation difficult, particularly given that the project would have difficulty qualifying for federal funding. Nonetheless, we agree that MassDOT should continue the analysis to determine how changing travel patterns and future federal, state, and local funding programs could be beneficial, including carbon pricing and Vehicle Miles Traveled (VMT) fees. We also offer these additional comments: Phasing: The study findings note that over two-thirds of the projected ridership is between Boston and Springfield. Future studies should consider an approach that includes an early phase of rail to Springfield with coordinated bus services connecting Pittsfield and Springfield. Other intercity passenger rail projects in the US have had similar bus/rail phased implementations that could bring insight into a phased implementation, with the goal of an ultimate one-seat passenger rail operation from Boston to Pittsfield. Future Travel Needs: We agree with the study recommendation to survey businesses and residents across the Commonwealth on how post-COVID travel and living trends, including work-from-home policies, might impact future travel and possibly make living outside of the Boston core more attractive. Findings from this survey would be helpful for the rail study as well other regional and statewide travel modeling. Operations and Governance: We agree with the recommendation for a white paper on governance structure options for passenger rail outside of the MBTA service area. The paper should include best practices from states that have successful state rail programs including Virginia, North Carolina, California, and Florida. This should also include an analysis of how these states coordinate with their freight rail partners. Funding Options: While the report includes a list of potential funding and finance options, a more detailed analysis of which funding and finance programs the project might qualify for, or show the most promise, would be helpful. Summary Table: The summary table 1-2 in the Executive Summary would be more useful if total travel times were included, as well as the number of projected round trips. The table should also include a footnote on where readers can learn more about the "Enhanced Hartford Line" and "Downeaster" scenarios in the report, as there is no explanatory text of these terms in the Executive Summary. Thank you for your consideration of our comments. If you have any questions, please feel free to contact me at tpollack@mapc.org.	Comment on Draft Public Report (October - November 2020)
DraftReport-110	Jim Geary		jim.geary@outlook.com	As a resident of Worcester I strongly support east-west rail improvements in the Commonwealth. Not only would this improve mobility for Mass residents, but it would allow connections to CT, NY, VT, and beyond. While airports, seaports, and highways are often rightly viewed as "loss leaders" that must be expanded and improved to drive the economy, rail for some reason is expected to justify its own existence through fare collection. This is wrong. We must invest in rail regardless of revenue projections just as we must invest in our airports regardless of current flight density. East-west rail will pay off tax revenue in the long run, and the Commonwealth must start now while borrowing costs are cheap, to provide a robust rail network for the next generation.	Comment on Draft Public Report (October - November 2020)
DraftReport-111	Matthew Barison		workingdefinition@gmail.com	This major undertaking is needed and would be a great benefit to the Commonwealth. I support the option that provides the fastest service, although even that option is not fast enough. I think we can do better and build a truly high speed rail system that does not share trackage (at least west of Worcester) with freight rail.	Comment on Draft Public Report (October - November 2020)
DraftReport-112	Rev. Allison Stokes		gallisonstokes@gmail.com	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). My conviction about this comes, in part, from attending a webinar about TCI on Tuesday, November 10th: "The Transportation and Climate Initiative: Clean Transportation for Rural Communities." Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	Comment on Draft Public Report (October - November 2020)

ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
DraftReport-113	Heidi C. Bara		bara.heidi@yahoo.com	As a resident of Palmer, MA, "The Town of Seven Railroads", a train stop here would benefit 21 surrounding communities as well as revitalize Palmer's downtown. To be able to take a train to Springfield to watch a hockey game, Boston for a Sox game or museums and dinner. To be able to connect to NY City, Pittsfield to Albany and beyond to Canada. Boston needs Western Mass for affordable housing. The population in Western Mass would have access to more job opportunities in the city. If we can start with existing track, and as ridership increases , improvements can be made for a faster ride. The state of Massachusetts needs East West Rail, with a stop in Palmer. Thank you	Comment on Draft Public Report (October - November 2020)
DraftReport-114	Rep. Lindsay N. Sabadosa (D)	State House Representative, 1st Hampshire District	Lindsay.Sabadosa@mahouse.gov	Thank you so much for your work on the East-West rail study. It has been interesting to watch this process unfold. I believe, however, as we have progressed with the study, we have run into, time and time again, its fundamental flaw: it looks only at Massachusetts. Our state has never, in recent times, invested in public transportation outside of the Boston area. Now, with the East-West rail study, we are, for one of the first times, examining rail outside of the eastern half of the state. In this study, we are ignoring what we have learned from the Valley Flyer, a much smaller project but an important one; we must work with other states. New England is simply too small to discuss rail as something that starts and ends in Massachusetts alone. From calculating potential ridership to determining who runs the railway system, East-West rail must be viewed in the context as a second Boston-NYC corridor, and an inland one that is less affected by climate change. In order to proceed and best access federal funding, Massachusetts must collaborate with CT and NY on a plan to make this rail a reality. We must calculate estimated ridership based on where and how people will travel, i.e. between our major urban centers in the Northeast. Massachusetts must either decide we are in the railroad business or we must find the partner that can run a service that is going to be cost effective for riders. We need a realistic cost of all the land that must be taken in order to make the service happen, a clear picture of the environmental impacts, a real list of barriers to construction with potential solutions, and a plan to present to the federal delegation in NY, CT, and MA that will allow them to secure the necessary funding for what will be a once in a generation project. The Northeast's infrastructure is failing on multiple fronts. Our roads were not built for high speed transportation. Our rail lines are barely usable, slow, and costly to maintain. Members of this advisory committee and the general public are asking the Commonwealth to make a bold investment and think beyond what we are currently doing to imagine what we could be doing. I hope that we will take this initial study and turn it into something that could be meaning not just for Massachusetts but for the entire Northeast region. We have the start of the second Northeast corridor within this study. We look forward to working with MassDOT as it explores the true potential of this rail and makes it a reality.	Comment on Draft Public Report (October - November 2020)

DraftReport-115	Thomas Matuszko	Berkshire Regional Planning Commission, Executive Director	tmatuszko@berkshireplanning.org	November 19, 2020 Dear Secretary Pollack, We appreciate the effort that has gone into the East/West Rail Feasibility Study which evaluates options for expanded passenger rail service across the Commonwealth. As you are aware, Berkshire County has very limited rail service. This study, along with the soon to be expected one for the northern route through Greenfield to North Adams, are key first steps in bringing about regularly scheduled service that will connect our region to other parts of the state. Our comments are intended to strengthen the integrity of the study and to clarify recommendations that will serve to set the direction for future efforts and lead to the implementation of reliable passenger rail service. Updated Cost Estimates Price estimates for the rail infrastructure improvements appear to be high and may overestimate the actual cost. It is recommended that a new price estimate for the improvements be developed by an organization whose main work is rail construction. This would likely improve the benefit cost ratio and provide a cost savings when the project proceeds to bidding/construction. Directly related to this, future efforts should focus on identifying ways to drive the cost down through innovation such as design build and public/private partnerships. Rail Service Operations and Oversight Discussion should be included regarding MassDOT's ability to provide oversight on passenger rail services. Options should be explored and evaluated to determine the approach to providing oversight on statewide rail programs and operations. Public-private partnerships should also be investigated and assessed which may result in substantial cost savings and reduced financial risk. Economic Benefits The Benefit Cost analysis could be improved by taking into consideration the indirect economic benefits which will result from enhanced rail service. This new service will increase economic activity and add new jobs; increasing ridership above what is reflected in the study. This effect stemming from increased economic activity should be reflected in new ridership projections and the recalculation of the benefit cost. The draft report recommends working with local and regional governments to facilitate land use decisions. The final report should also include a recommendation for MassDOT to work with and actively engage local and regional governments to identify indirect economic benefits. Commitment to Further Progress Most of the recommendations contained in the draft study require further effort. MassDOT should commit to providing the necessary staff support and resources to move identified actions along and insure that they be completed in a professional and expeditious manner and do not languish. The final report should include a schedule for MassDOT to complete these efforts. Preferred Alternative BRPC recommends that the 4/5 hybrid be selected as the preferred alternative. It provides the fastest travel time, has the largest number of daily trains, and has the greatest potential for this alternative to achieve success. The draft report recommends keeping Alternatives 3 and 4 under consideration until additional information is known. It is recommended that only one alternative, the 4/5 hybrid, be selected as the only alternative so that it can be expeditiously advanced in greater detail. Travel Time Improvement The maximum speed between Springfield and Pittsfield is indicated as being 59 miles per hour. This is the slowest speed rating along the entire route. Improvements should be identified that would increase the average speed of 44 mph and improve the travel time of 1:12 hours between Pittsfield and Springfield. Corridor Acquisition Analysis All the alternatives developed in the study are based on the premise that CSX will remain the owner and based on CSX passenger rail requirements that are over burdening and costly. This has resulted in a significant number of improvements being required for the proposed service which come with a significant price tag. An alternative approach	Comment on Draft Public Report (October - November 2020)
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			could be to acquire the corridor from CSX. A cost analysis could determine the price point where it would be more cost effective to acquire the corridor and lessen the amount of CSX required improvements. Also, by acquiring the corridor, passenger service would not suffer from operation decisions being made by a freight railroad. Construction Phasing It is recommended that construction of system upgrades for the preferred alternative, 4/5 hybrid, emanate out of Springfield in a simultaneous manner towards both Pittsfield and Worcester. This will serve to insure that connectivity to Pittsfield does occur and occur much sooner in comparison to construction of improvements beginning in Boston or Worcester and moving west Operating and Maintenance (O/M) Costs The document lacks detailed data on O/M costs for the various alternatives. At a minimum, this information should be provided for the 4/5 hybrid alternative. This information is critical to determine the price point for tickets and to determine what level of subsidy will be necessary. Please add this information to final document along with any other anticipated revenue. Related to operations, the RTC rail corridor capacity analysis was not mentioned in the draft. Please add a discussion and include the analysis in the appendix to the final report. Service Connection to Albany The study's recommendations should advise that this new east-west service should connect to Albany/Rensselaer and that MassDOT Rail and Transit Division initiate discussion with Amtrak and NYSDOT. By adding this 37 mile segment, additional options are created and can further increase ridership and provide additional economic opportunities. Engage CSX For this new service to become operational, approval from CSX is required. Conversation with CSX should begin immediately to be able to implement this east-west service in a timely manner. Waiting for some future point to start a dialogue would likely lead to further delays. Also, these discussions can be used to determine if CSX has any interest in selling this corridor. Green House Gas Emission (GHG) Reductions This study determined that the displacement of vehicles and mode shift to rail will not provide a net reduction in emissions due to high level of pollutant emissions from the locomotives. The study should recommend that more attention be given to identifying a cleaner fuel or another locomotive type that has lower emissions and results in lower GHG emissions. Legislation and Funding The final document should include a discussion on appropriations and authorization legislation to secure funding for this rail project at both the State and Federal level. Including policy recommendations for funding and corresponding amounts will assist legislators as they develop their bills to acquire funds. The study is limited in its discussion on other potential funding sources and at a minimum a list of funding sources should be included. We appreciate the opportunity to provide comments on the draft East/West Passenger Rail Study and trust that these comments will be addressed in the final document. BRPC is committed to improving mobility options in the region and looks forward to working with MassDOT in advancing this effort through to service implementation. These comments were endorsed by the Berkshire Regional Planning Commission at its meeting on November 19, 2020. Sincerely, Thomas Matuszko, Executive Director cc: The Honorable Charles Baker, Governor The Honorable Edward Markey, U.S. Senator The Honorable Elizabeth Warren, U.S. Senator The Honorable Richard Neal, U.S. Congressman The Honorable Adam Hinds, Senator, Berkshire, Hampshire, Franklin & Hampden	
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ID No. (date)	Name	Address/Affiliation	Email	Comment (verbatim if email or comment form, see PDFs for letters)	Source
				District The Honorable John Barrett, Representative, 1st Berkshire District The Honorable Paul Mark, Representative, 2nd Berkshire District The Honorable Tricia Farley-Bouvier, Representative, 3rd Berkshire District The Honorable Smitty Pignatelli, Representative, 4th Berkshire District Mayor Linda Tyer, City of Pittsfield Jonathan Butler, President and CEO, 1Berkshire	
DraftReport-116	Robert & Lynne Horvath		lynnehorvath@outlook.com	Ywo things: Sooner or later we are going to kill our world with travel and transport (car, bus, airplane) emissions. It's looking more like sooner. We must make high capacity vehicle travel available. For Pete's sake, look at Europe and Asia. 2) In Western Massachusetts, we want to grow our towns and economy despite weather problems,, but can't do it with such large distances and one major highway. We need easy, inexpensive travel (Amtrak is exorbitant).	Comment on Draft Public Report (October - November 2020)
DraftReport-117	Ron Yaple		ronyaple1@gmail.com	When our children were young in the early 2000's, we took two family trips from Pittsfield to Boston. The Lake Shore Limited ran late from Albany and the crawl over the Berkshire Hills seemed to last forever, and we sat while CSX freight took priority. Nonetheless we enjoyed our journey and accepted the extra time compared to the Mass Pike. Our trip was for leisure. A commuter daily trip, if over 3 hours would be out of the question. Even so, I support improved tracks, trains, and other infrastructure and will use the trains to Boston over the next 20-30 years in my retirement. I'd rather be relaxing, reading, and writing than sitting at a crawl on the Mass Pike. The absurdity of car travel for commuting and long-distance leisure should be obvious to everyone by now. I'll conclude with this: MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	Comment on Draft Public Report (October - November 2020)
DraftReport-118	Amy Cairy		amylmoy@yahoo.com	This service would open up many more job opportunities for myself and my family. Certainly, it would do the same for countless others.	Comment on Draft Public Report (October - November 2020)
DraftReport-119	Adam Garvey		adamjg9@comcast.net	The East-West Rail would be game changing for the entire state. Palmer, the town of seven railroads has a perfectly, centrally location for a station. The Massachusetts Turnpike exit and route 20 lead you right into downtown Palmer, making an easy location for daily commuters. This project would benefit the entire state, offering Boston residents affordable housing. This opens up doors for western mass, with jobs and opportunities. Many area residents work in Boston and commute. I would rather spend my money in Massachusetts, rather than West Hartford, and Manchester CT. as the commute is so much easier. This project is way overdue, and EVERYONE would benefit.	Comment on Draft Public Report (October - November 2020)

ID_No	Name	Comment	MassDOT Response
1	James Garrett	Your study concludes with saying you need more studies! You should be ashamed of yourself Sec. Pollack and Gov. Baker! Found these 1300 other pages of studies you lying liars! https://web.archive.org/web/20170106024324/http://www.massdot.state.ma.us/northernnewenglandrail/Documents.aspx Just admit that the Picknelly brothers are pulling your strings and drop the "nice Republican" act.	The East - West Passenger Rail study area and goals were different from NNEIRI, and were intended to explore potential pathways towards additional passenger rail service between Western and Eastern Massachusetts. The study leveraged analysis from the previous NNEIRI effort, and also developed more detailed capital cost estimates for alignments and technologies, as well as speeds and travel times that were not investigated within NNEIRI. As noted in Chapters 1 and 6, there is additional work to be done to fully complete the conceptual planning stage for East-West rail. This work includes discussions with CSX about certain physical/operational elements and requirements, understand the governance options for expanded passenger rail in Massachusetts, more detailed study of economic and community benefits and impacts, and evaluation of funding sources and strategies.
2	Ann Marie Messbauer	I understand that this is a very complicated and expensive project. I have read the summary of the alternatives and would like to support the Hybrid 4/5 plan. (I live in Springfield.)	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
3	Roland Cadorette	I would like to see East-West Rail in Massachusetts become a reality.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

4	Athena O'Keeffe, Clerk of the Council	The Amherst Town Council voted to adopt the following resolution on October 19, 2020: RESOLUTION SUPPORTING THE EAST-WEST PASSENGER RAIL Whereas, residents of Amherst are underserved by public transit connecting them to Worcester and Boston; and Whereas, the Flagship Campus of the University of Massachusetts is located in Amherst and many of its students, faculty, and staff would benefit from public transit connecting them to eastern Massachusetts, including other UMass campuses and work and internship opportunities in Worcester and Boston; and Whereas, train service would provide an alternative to travel on the heavily-congested Massachusetts Turnpike; and Whereas, travel by rail reduces carbon emissions and air pollutants; and Whereas, inequity in public transportation creates an environmental justice issue for low-income and minority populations living in Amherst; and Whereas, Amherst is a potential passenger rail stop on the Central Corridor rail line, running between New London, CT and Brattleboro, VT; and Whereas, a passenger rail stop in Palmer could serve as a transfer point to train service north on the Central Corridor rail line to Amherst; and Whereas, PVTA bus service connecting Amherst to Belchertown Center could be extended to Palmer as an interim step, pending restoration of train service to Amherst station. NOW, THEREFORE, BE IT RESOLVED, the Town of Amherst supports East-West passenger rail connecting Springfield and Boston with a station stop in Palmer. BE IT FURTHER RESOLVED that the Clerk of the Amherst Town Council shall cause a copy of this Resolution to be sent to Massachusetts Governor Charles Baker; members of the MassDOT East-West Study Advisory Committee; Massachusetts President of the Senate Karen E. Spilka; Massachusetts Speaker of the House of Representatives Robert A. DeLeo;	Thank you for your comments. We appreciate your interest and formal support regarding west to east passenger rail service in Massachusetts.
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		Members of the Joint Committee on Transportation of the General Court; State Senator Joanne N. Comerford; and State Representative Mindy Domb.	
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5	Gail Farnsworth French (QRCC)	Makaela Niles, Project Manager MassDOT East-West Passenger Rail Study Dear Ms. Niles, The Quaboag Region Coordinating Council (QRCC) encourages MassDOT to implement east-west passenger rail service across Massachusetts with a stop in Palmer. The QRCC, a state-recognized transportation planning and advocacy group, meets monthly in Ware. Chaired by Quaboag Valley Community Development Corporation, its participants include representatives of local town governments, senior centers and COAs, social service agencies, regional hospitals, regional transit authorities (RTAs), a veterans advocacy group, regional planning commissions, the superintendent of public schools, community representatives and MassDOT. After years of helping to develop and promote the Quaboag Connector van service, the QRCC understands the transportation needs of residents throughout the Quaboag Region as it provides essential travel to daily destinations including employment, medical appointments, job training, educational institutions, and vital grocery and supply venues. The Quaboag Connector is a lifeline service for many, and we are currently in the process of re-designing it to be a model for expanded rural transportation. A video infomercial was created to locally and generate support for the Quaboag Connector service. We have included it here to provide you with a sense of its purpose and success: https://youtu.be/iKV-MHeW7ql Currently serving residents of 9 towns, the Quaboag Connector continues to expand to meet the transportation needs of rural residents in a region which has few other public transit options. Future planning for the van service includes pilots of fixed route service along major state highways connecting even more towns between Worcester and Springfield. Our current work and efforts would be greatly enhanced by the addition of train service at Palmer. Through coordination with the Pioneer Valley Transit Authority (PVRTA) and Worcester Regional Transit Authority (WRTA), the Quaboag Connector already connects to their routes, thus providing a baseline for regional connectivity. A rail stop in Palmer	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.
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would be augmented by the current Connector service providing a more seamless connection to the state at large. We envision the Connector as a providing a vital service to residents by acting as a feeder for the train stop.

A rail stop in Palmer will boost the local economy by creating new business and employment opportunities, but more importantly it will result in numerous economic benefits to the Commonwealth. Our Region’s beautiful and land-spacious communities have the potential to mitigate the unsustainable housing crisis now afflicting the eastern part of the state. Access to rail transportation in Palmer will relieve the current congested and unpredictable travel route of the Mass Pike and create an opportunity for productive worktime travel while lessening dependence on fossil fuels. True economic benefit for the whole state hinges on statewide equitable and accessible transportation options for all residents. We are diligently doing our part to assist residents of the Quaboag Region with transportation and are encouraged by this effort by MassDOT to equitably serve the Commonwealth.

We have closely followed the East-West Passenger Rail Study, and look forward to future development, as soon as possible, of a much-needed train service connecting the four major cities of Massachusetts and including a Palmer stop in our Quaboag region.

Sincerely yours,

Gail Farnsworth French,
QV CDC
Chair, Quaboag Region Coordinating Council

6	Sarah Kleinschmidt	Thank you for undertaking this study and considering some alternatives to our current transportation mess. I would like you to strongly consider the plan 4/5 or other higher cost options for the following reasons: - costs of climate change will be catastrophic to the region, for instance as Seaport and other coastal areas are underwater - climate change related flooding will likely shift more population West in state - expected ridership is difficult to estimate and likely below future actuals. For instance, I currently live in Cambridge but am interviewing for a job in Springfield. Transportation time and mode is a key factor as I decide where to live and work. Once these alternatives exist I would be very likely to take advantage of them even though I currently am not located in these areas. In short, I want to encourage you to think and act both broadly and boldly. Our current model is broken, leading to traffic, injuries and already downtown flooding. Leadership means being able to see big threats and make big moves to manage them.	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
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7	Arnold Mark Zinan	There is no way, the cost of a rail system is justified by the need. People from Boston and the suburbs are not coming out to Springfield. They never have and never will. And, how many people, are going to travel to Boston. Especially, living with Covid, means working at home.	We appreciate your interest in the study, and thank you for your comments.
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8	Kent Pattterson	Although a New York State resident, the building of an East/West corridor is logical accross the state. Eastern Mass (BOS-SPR) is corridor decades overdue for building (and some trains may continue to NYC, WAS). Honestly, I'm surprised it took this long. Western Mass has attractive destinations, and could use some improved service to the state capital, Boston. Also, nearby is Albany west connections west.	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
9	Amanda Knightly	I am a young professional who went to college in Boston, but my family is from South Hadley. The Boston area is far too expensive even for highly educated people like me to afford to live comfortably in. East-West rail along the Pike is practical and makes SO MUCH SENSE! Please take this step so our cities can continue to be home to young professionals post-COVID, and we can have viable housing options further out.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
10	Greg Moore	From New York, but if you could coordinate with NY to extend any trains to Albany, I would DEFINITELY ride, as would most of my family!	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
11	Andy Berkvist	I am all in favor of adding rail stops along the East-West corridor. Making it possible to get from Pittsfield to Springfield to the Boston area (with stops in-between, or transfers to the local commuter rail) would be a boon to travelers (and reduce pollution). Staying off icy roads in winter would also be a plus.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

12	Nathanael Nerode	Failure to study service to Albany, NY has crippled the study. The added ridership and revenue from service to Albany -- paid for by upstate New York residents such as myself visiting Massachusetts -- would substantially defray operating expenses of any selected option. The study should be reopened to consider extending all Pittsfield service to Albany-Rensselaer station. Ridership and revenue from New York residents would improve the financial profile of the system while the operating costs would not change much. The availability of Amtrak's facilities at Albany-Rensselaer would provide operating synergies for the layover of trains between runs, and therefore reduce capital costs at Pittsfield -- Pittsfield would only require a station and not a layover facility. Doing the necessary upgrades to track necessary for the less than 40 miles from Pittsfield to Schodack Landing (where Amtrak's Amtrak-owned line from Albany separates from CSX) is likely to be cheaper than adding a layover facility in Pittsfield. The Amtrak-owned line should not need upgrades as it was upgraded quite recently and currently carries only one passenger train each way per day. This would also provide additional service options for Massachusetts residents visiting upstate New York, or points beyond -- or for Pittsfield residents commuting to Albany, which is well within commuter range. I strongly support the recommendation that "MassDOT should work with Amtrak to determine terms for increased right-of-way usage and the feasibility of service to Albany". I would add that the New York State Department of Transportation and New York State government in general, as well as the local governments in the Albany area, should be contacted as well. New York might want to add a station in Chatham. Other than this comment, I support any of the options (3, 4, or 4/5 hybrid).	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
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13	Hugh Barrett	Thank you to the Mass DOT staff and the Advisory Committee Members for their work to date. The draft study notes in the Section 5.3, Next Steps and Recommendations, that additional area of future study include more detailed analysis of “potential economic and community impacts and benefits of East-West Passenger Rail.” (Page 110]. The draft study then describes a number of potential area of study including local community engagement, potential economic benefits, and expectations of use by the business community. Notably missing from the area of future study include the potential environmental, community health and equity benefits of replacing automobile emissions with enhanced rail service. I would encourage the inclusion of the study of said benefits in the draft study. The COVID-19 pandemic has demonstrated clearly that air quality and local air particulate emissions have significant public health implications. A study conducted at Harvard indicates higher particulate emission is associated with an 8% higher death rate from COVID-19, which is consistent with other studies that show increased exposure to air pollution results in other significant negative medical outcomes. There is also research that demonstrates the disparate impact of air pollution on communities of color. https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-pollution/ I would strongly urge that the recommended areas of future study include the potential public health and economic benefits (reduced mortality, reduced medical and hospitalization costs) from replacing automobile commuting with enhanced rail service. Besides being the right thing to do, it may also indicate significant financial benefits to the Commonwealth beyond the usual business and economic development near the new train service. Thank you for your consideration.	We appreciate your interest in the study, and thank you for your comments. This study presented a high-level, quantitative assessment of the changes in transportation-related emissions that would likely result from a wide-range of service scenarios. Future analysis could allow for the assessment of environmental, community health and equity implications of those emissions changes.
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14	Kevin Tierney	Would it be possible to get a copy of a ridership forecasting technical memorandum or other similar documentation to review? I tried to get additional technical details on the forecasting method from the previous Northern New England Study that is cited in the East-West report, but I could not find anything with technical detail there either. I have some concerns about the appropriateness of using the incremental direct demand methods that are generally described in the East-West report, but it may be that I simply do not fully understand what was done.	Thank you for your comment. We appreciate your interest in the study. To clarify, the same ridership model employed for NNEIRI was used as a base from which to incrementally build this study's model. The study's Ridership Methodology document will be available on the study website.
15	Tom Robitaille	I am a Chester resident moved here 4 years ago lived close by my whole life. I purchased my home in Chester to be secluded as most Chester residents have. I believe this would bring more people to Chester which would inevitably bring more crime. Leave Chester the way it is most people in Chester chose to live here to get away from big city's as Pittsfield, Springfield, and Boston, not looking for a direct route to those city's.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
16	Robert Kearns	I support East West Rail from Pittsfield, Springfield, Palmer to Boston. MassDOT should be planning to have a preferred alternative and have a timeline to do this as an economic development and stimulus project for the pandemic relief. I travel between Western Mass and Eastern Mass to visit my girlfriend and would take the train. I have taken the Lake Shore Limited East-West to experience the ride previously and it is a very scenic route. When I was an undergraduate student at the University of Massachusetts Amherst I also traveled frequently between Eastern and Western Massachusetts. Other students travel this frequently as well to visit family, go to internships or other matters. The Peter Pan bus is not preferable, I would rather take a train, and other students would as well. For the Public Meeting on October 22nd, I wish you allowed more comments and that we were able to see the comments of other participants and vote on them. I have seen this done in other zoom meetings. I had my hand up and was not allowed to speak because I asked a question in the Q&A. Is MassDOT assuming fixed fares or fluctuating fares for ridership? I would urge MassDOT to have fixed fares like the CT Rail, Downeaster and MBTA	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative. Although fares are implicitly incorporated via the two proxy services used for the ridership forecasts, the actual cost of a rail fare between two markets was not explicitly incorporated into the ridership model (or developed within this study).

		commuter rail over fluctuating fares of the Vermonter, Valley Flyer and Amtrak Northeast Corridor.	
17	Betsy H. Port	Dear Ms. Niles- I am unable to participate tonight due to a previous engagement. The significant work you have done is admirable but it was difficult to read all the charts and graphs online. The print was too small. I urge you to get things going ASAP and I hope you are no longer considering using buses in Western Mass to achieve the travel needs of our residents in Western Mass. Please send me the results of the meeting tonight. We sorely feel left out and abandoned in this area. It was easier to travel by rail in the 1800s around here! What a sad state of affairs!!!	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We apologize for the difficulty in reading the graphs and charts during the meeting, and all meeting material has been posted to the study's website.

18	Peggy H. Davis	I was glad to hear the comments at the Zoom meeting today. I would like to stress my interest in a train that would connect North Adams-Greenfield-Boston. I had the pleasure of taking the train to Glacier National Park and with the help of the motel operator, we did not need a car for our visit at all. In a similar fashion, I would love to see tourists coming to the many spots along Rt. 2 for vacations without their cars, using a network of buses or vans to get from one place to the other. Greenfield, Charlemont, Shelburne Falls, in my area, have many tourists. Personally, I would be using the train to go to Boston. I've used the Greenfield to NYC train once it started and know that, post-COVID, I would be using a train to Boston much more often than I currently drive to Boston. When I do so, I park at the closest station on the Fitchburg line and get to Boston that way. I hope to see a train I can take from Shelburne Falls, but I'd settle for Greenfield! Peggy Peggy H. Davis Calligraphy 413-624-3204 389 Adamsville Rd Colrain MA 01340	Thank you for your comments. We appreciate your interest in the study. As you may be aware, legislation has passed that includes a study of passenger rail options between North Adams, Greenfield, and Boston via Route 2.
19	Lauren Miller	I am very pleased to see the study is moving forward. I am extremely hopeful to see Pittsfield included with rail access beyond the once daily round-trip of the Lake Shore Limited. Alternative #3 or #4 are my favored options. I believe they balance both sides of keeping costs reasonable, better speed options, and median impact of existing environment. Thank you.	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
20	Stephen	Why are people so infatuated with this idea? It will be a giant waste of taxpayer money for years to come. People don't want to ride the train and with situations like covid-19 no-one wants to be crammed together just like the subway.	We appreciate your interest in the study, and thank you for your comments.

21	Michelle O'Brien	I'm curious about the study since I am very interested in having a rail connection from Pittsfield to Boston but have not seen-heard-or been contacted for any kind of poll that would ask area residents if they would use this service. I have only seen articles talking about the service. This is a service we desperately need.	We appreciate your interest in the study, and thank you for your comments. As detailed in Section 2.5 Civic Engagement, the study convened three public meetings where public feedback relative to the alternatives considered and evaluated was sought, including two in-person meetings held in Springfield (March 2019 and February 2020) and a virtual event in October 2020. The study also held six Advisory Committee meetings over the course of the study where members of the public were welcome to attend and participate.
22	Kate Fletcher	Good morning, I was not able to attend the presentation and public comment session on the rail study nor have I followed the issue. I do not have a transportation background but it seems that train lines depend on density which could be problematic in this case if the investment in infrastructure involved is costly. That said, has improved bus service been considered as an alternative? I understand that there are buses with wifi and comfortable seating that are a far cry from the buses of the past (and probably present) with their dirty windows, odors of chemical cleaning supplies, inconvenient schedules and less than inviting stations like the one in Springfield. It would seem that an improved bus service could offer the flexibility and advantage of being scalable depending on demand. Thank you, Kate Fletcher Planning Board Member Stockbridge, MA	Thank you for your comments. We appreciate your interest in the study. None of the Preliminary or Final Alternatives contemplated improved bus service as the sole or primary means of connecting the corridor markets. While modern bus amenities increase passenger comfort, feedback from the Study Advisory Committee and general public was largely negative with regards to implementing bus service in place of new passenger rail connections. Although the Bus Rapid Transit technology was assessed during the development of alternatives, it was discarded due to its limited ability to achieve travel times that would be competitive (or faster) in the western portion of the corridor than the personal automobile.

23	David Golden	Hi Makaela. I am a resident of Palmer and had been involved in the early stages here of trying to bring back east/west rail service. I am so happy with how far this has come and do know it's far from a done deal but can't help but feel the excitement here in Palmer about the possibility. Palmer needs this shot in the arm as the last MA Pike exit with almost no commercial growth. This exit serves as the Gateway to Western MA and we should be thriving but we are not. As the Chairperson of the Palmer Master Plan Steering Committee, this is a major concern that has consistently been brought up and possibilities for that growth just continue to elude Palmer except for this East/West Rail stop! As I looked through the draft report and watched last evenings forum, which I applaud the folks who made this happen, I have to say that as a layperson with no real rail knowledge, Option 3 jumps off the pages to me as the smart choice to get this project moving. Funding is no doubt an issue so why wouldn't we save the billions for the sake of maybe 20 minutes saved travel time? I am confident that the price tag will play a huge part in the decision making and will push the decision back by probably years so let's present a viable option, #3, and get Western MA opened to the rest of the Commonwealth! We are ready, willing and able to make this happen for Palmer and all of Western MA! Thank you, David Golden	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
24	Sasha Gainen-Truslow	I'm baffled why Chester would be a stop on the proposed line. There's absolutely nothing there. Obviously the creators of this study have never been to Western Mass. Another issue is that an Amherst/Northampton stop makes much more sense than Springfield. The people who live in Springfield and its suburbs don't travel to Boston. They have no need for this train. Northampton/Amherst has seven colleges in the area which have a large population from Eastern Mass. There's currently not even bus service from these schools to Boston. The Pioneer Valley is majority middle/upper class who travel often. I'm sure they would love an easier way to get to Logan Airport. Northampton already has a new train station, and Amherst has an old one. Either could be used for this new project. Thank you.	We appreciate your interest in the study, and thank you for your comments. Chester's inclusion as a stop is due to calls from local advocates and the historical presence of a train station and passenger service. Amherst/Northampton does not lie on the existing rail corridor that all of the Final Alternatives employ, so it could not be a stop on the corridor service as defined in the Final Alternatives. However, those communities and others within the Five Colleges area all lie within the 20-mile ridership catchment radius for Springfield Station. In addition, the updated ridership forecasting methodology was adjusted in order to enhance the ability for trips to and from those communities via Springfield Union Station.

25	jeffrey scott penn	hi guys - regarding the East West Rail link i have a few thoughts. thru Jacob's Ladder Scenic Byway and the National Wild and Scenic Westfield River, i have helped lobby for protection of the extraordinarily rare Rural lands of Western 413. such onslaughts as the Gas Pipeline, Acres of misplaced Solar Fields and Inappropriately sited Wind Turbines are harming this rare and delightful treasure of nature; this irreplaceable landscape. such unsympathetic projects are usually promoted for Economic Development. we must remember, this area's less expensive living is partly due to our relative isolation from urban centers. we live out here knowing we need to travel for services; it is not right to demand the services follow us - instead, we are stewards of this historic and beautiful Rural Landscape. that said, vast historical change occurred in three sweeps - late 18th century theft of all the lands from the native americans who, unfortunately, sided with the French in the French and Indian War. the second wave was the coming of the Railroad which led to intensive settlement around industrial establishments. the last wave was two-fold; the coming of the Automobile and the great depression which resulted in redirection of commercial travel and jobs away from the rural region to the urban centers and the slow eventual closure of local industry. in order to reinvigorate local economy, we need to recognize local character and qualities and augment them - Arts, Recreation, Home industries and rural-scaled local services. to this end, the best infrastructure to add would be Internet Access and Public Transportation. while it is compelling to add East-West Rail transportation, centering one new rural stop would not solve this. it would recreate the same type of overdeveloped node which we successfully argued to end the potentially devastating Turnpike Exit proposal. instead, the former Train Depot villages (Hinsdale, Washington, Bancroft, Chester, Huntington and Russel in our region) should be considered for a local service like the historical Rabbit Run of the Rural Quabbin area. this could be subcontracted to Historic Trains or part of the greater DOT and bring local people to Pittsfield, Westfield or Springfield opening the world to the Rural region without associated overdevelopment pressure. please consider thank you cheers jeff jeffrey scott penn, architect	We appreciate your interest in the study, and thank you for your comments. This study was focused on connectivity between Pittsfield, Springfield and Boston. It is also important to note that the number of stops on a service has impacts on the overall travel time.
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77 worthington road
huntington ma 01050
413-531-1868

26	Pieter W. Lips	Mr. Britland, I have been casually following the progress of this study, even attended one of the regional meeting in Springfield, Mass. I had my advertising and marketing business in Pittsfield for many years and live just over the state line in New York. I'd be curious to know what discussions you have had with CSX headquarters in Jacksonville in regard to allowing 'slots' for additional passenger service over any shared track segments. Amtrak's train #448, the Lake Shore Limited was delayed an hour recently due to downed trees along the right-of-way east of Pittsfield. Also, where will locomotives and coaches come from? The German firm Siemens is building locomotives in the US now, State supported passenger services have been buying these locomotives. You are likely (certainly should be) of issues when acquiring passenger coaches from the giant Chinese coach builder China Railway Rolling Stock Corp. (CCRC). Thanks, Pieter W. Lips East Chatham, NY	We appreciate your interest in the study, and thank you for your comments. CSX was formally advised the Study was being undertaken and has been provided periodic updates of its progress by MassDOT. The study team has been guided by CSX policies regarding operation of passenger service over its lines and has taken these policies into account in developing the service plans and infrastructure improvements envisioned for each alternative. As noted in Chapters 1 and 6, there is additional work to be done to fully complete the conceptual planning stage for East-West rail. This work includes discussions with CSX about certain physical/operational elements and requirements. Details related to the procurement of passenger rail locomotives and coaches, including the vendor, style, and model number, would be investigated in a subsequent phase.
27	Jonathan Adams	I would like to advocate strongly for the adoption of the Alt 4/5 hybrid option. Increasing maximum speed and reducing travel time by 10 minutes between Worcester and Springfield is critical to making rail travel competitive in central and western Massachusetts. As more connection options open up, particularly as an NEC alternative, this time savings will accrue even more for all future riders in this corridor.	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
28	Brad Blauhut	To Whom it may concern: As a traveler between Albany, NY and points in Massachusetts, I am excited about the prospect of increased rail frequency. Currently, there is one option - the Amtrak Lake Shore Limited. Even at it's best performance, it is not even an option I would consider. The trains are chronically late and Amtrak employees are rude. And even when it's on schedule, the trip from Albany to Springfield takes well over two hours. However, since Pittsfield is just 30 miles from Albany, and the ninth busiest station in Amtrak's system, I feel that extending your planned rail enhancement to the Albany/Rensselaer station would make your system MUCH more accessible. Thank You, Brad Blauhut bradblauhut@gmail.com	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

29	Tamsin	I think an East-West rail line would be quite beneficial. It would allow for easier commuting between Boston and other more westerly cities in Massachusetts, and would also encourage in-state tourism.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
30	Barbara Alexander	I attended the Zoom on October 22, 2020. The study appeared to be engineered to produce a pre-ordained result. I speak as a Harvard PhD in economics, and a former Chief of Research at the Texas Public Utility Commission. If what seems obvious is, in fact, the case, I strongly advise the staff involved, especially the younger ones, to resign and go public with their knowledge about this process. One of the first studies I led at the Texas PUC was a cost-benefit analysis of a large power plant in the early 1980s, in which a more traditional staff group had rubber-stamped an industry request. Even the rather conservative PUC was determined to do better for the public interest and produce a genuine analysis. The Commission directed my group to re-do that analysis and to review all such applications in the future, being aware that more and more economic growth was being produced with fewer and fewer energy inputs. The Massachusetts DOT, by contrast, seems to be on track to cut off even the prospect of a re-established lifeline to the entire Western part of the state, in the teeth of a climate emergency. It is a travesty, and having taken part in it may haunt those complicit in it for the rest of their careers.	Thank you for your comment. We appreciate your interest in the study. Consistent with the guidance provided by the federal government, the study's monetized benefits strictly flow from the transportation-related effects of the project (e.g., faster rail trips result in travel time savings, reduced transportation-related emissions, etc.). The Benefit-Cost Analysis Technical Memorandum will be made available on the study website and will provide more information on the process and inputs used within the benefit-cost analysis. As noted in Chapters 1 and 6, there is additional work to be done to fully complete the conceptual planning stage for East-West rail. This work includes a more detailed study of economic and community benefits and impacts.
31	Matt Sokop	A much simpler first step would be the construction on an exit from the mass pike directly to the Southborough metro rail stop along with a sufficiently size parking garage to accommodate the cars that currently park there with the additional cars that would come from western mass. Additionally, TOD could be included to make the location more of a hub of commercial opportunity with retail, residential and commercial space fully explored as options. Traffic from western mass to this new exit would be minimal and being able to take rail to Boston from this point would greatly reduce travel time to Boston as well as preclude the need to pay for expensive city parking.	Thank you for your comments. We appreciate your interest in the study. As Southborough is already served by the MBTA Commuter Rail, the provision of additional car storage at this location is unlikely to provide substantial benefits to residents of Western Massachusetts (especially those with limited or no access to a personal vehicle) or the intent of the study (i.e., examine passenger rail connections between Pittsfield, Springfield and Boston).

32	Joseph Zagrobelny	We have a key follow up meeting with Massport this week to discuss iSAIL Transit from Logan Airport west you can help make it happen, and make it all the way to Pittsfield just imagine Boston to Pittsfield in 33 minutes versus over 3 hours Now imaging that for \$300M versus \$2.4 to \$6.6 billion!! Now imagine that we integrate iSAIL Transit with the future of education for ALL, based on the proven Tiger Ventures Alternative High School that prepares even the most challenged for graduation with the necessary skills to be successful in life – career, college, and many even start thriving companies right out of high school. As we work to decarbonize and embed equity and racial justice into all Urban-Rural planning, there’s no better way than to get everyone engaged with iSAIL Mass – The Future of Community, Education and Transportation with Pods that Fly How exciting would it be to see ALL the Mass Communities be world leaders with Opportunity for ALL in a \$4 trillion ecosystem? Nine-AI is a team of very unique scientists (MIT PhDs), educators and seasoned entrepreneurs that rapidly get innovation into practice. We would love to see if we could work together as we revolutionize education, transportation and communities – to build the Mass-Global Regions we need, and reduce housing costs by 75% for underserved in East Boston with an education and transportation revolution. During the current pandemic, communities of color are bearing a disproportionate burden, and the large racial divide in America is widening. The Business Roundtable with 208 CEOs has a mission to change the game for Family Wealth for African American, Latinx and indigenous and “ensure every person can fully realize Opportunity and Justice in America.” https://www.businessroundtable.org/equity Several companies are Nine-AI partners. iSAIL is Integrated StreetSmart AI (SAI) and Lifestyle – AI based on functional theory proven to work where other methods fail. iSAIL is Super-disciplinary, multi-dimensional People-SAI Partnering to iSAIL Optimize Quality of Life – for ALL People and the Planet. iSAIL Learning & Transit will radically reduce the impact of racism and poverty on society and create great opportunities for everyone. It will reduce rents for the underserved by 75% in all major metropolitan areas and transform education with iSAIL HILL – Holistic Integrated Learning for Life. iSAIL HILL is based on the proven Tiger Ventures Alternative	We appreciate your interest in the study, and thank you for your comments.
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High School that prepares students for life by combining entrepreneurship and business with education. Many underserved students build thriving companies after graduation in communities with few resources – everyone is well prepared for what’s next in life. iSAIL HILL, Tiger Ventures on Steroids, integrates the Next Generation Transportation and StreetSmart AI (SAI) to make learning Amazing, Engaging, Exciting and Rewarding – learn on a screen, apply in work and play – and get paid in the transformational Value Chain Optimization – driven by SAI-based Radical Finance Innovation for Schools, Teachers, Students and businesses of the future – today – guided with a fresh team spirit – and if necessary, trained Leaders for Tiger Ventures by our Dr. Suzanne McLeod – one of the great forward-thinkers in education.

iSAIL Transit is Towers, Guides and Pods that Fly for 80-100 mph intracity/250 mph intercity at the cost of asphalt, \$2M-3M/mile and 1/100th the cost of even light rail at \$250M/mile, \$1B/mile for hyperloop (IF it works) and up to \$5B/mile for heavy rail. iSAIL is based on decades of R&D at DARPA, NASA and MIT with AI proven to work where other methods failed. iSAIL Transit will open up a whole new world of urban-rural affordable housing and land use optimization, turn commutes and freight delivery from hours to minutes, and Radically Reduce GHG emissions. SAI will ensure we don’t have 737 max-type issues.

Our iSAIL Tower architecture can include revenue from Transit, a breakthrough Renewable Energy T&D Backbone, EV Charging and 5G, and integrated into the education system for a transformation in learning and education from birth to end-of-life and funding from many sources – including the 208+ companies on the Business Council to end racism – I’ll send you more details if you’d like.

5G is VERY critical to solving the Racism Public Health Crisis along with iSAIL HILL and Transit – to transform education and reduce rent for the underserved by 75%!
Together, we can lead the Nation for meeting the our North America-Global (mobility) objectives, and start with near-term objectives that could include:

1. Freight demand modeling and analysis as we’re engaged with the U.S. DOT – to build the Transportation Network we need – local, national and international
2. Safety-Security – iSAIL Next Gen Communications and integration with the Air Force Team Awareness Kit (TAK) used by all DHS agencies – will help address is the 1,000% increase in border drug traffic
3. Workforce

4. iSAIL Energy-Fin-Transit – Massachusetts East-West-Regional–International - including connection to Montreal and Quebec Hydro for energy decarbonization.

Please contact me to discuss how we can meet the urgent demands for East-West Mass transit innovation, decarbonization and education AND create Great Opportunities for ALL, especially those that have lost hope

Thank you very much!
Joe

Joseph Zagrobelny
Founder & CEO, Nine-AI | www.nine-ai.com | M: 781.825.3267 | joseph@nine-ai.com

33	David W.	Dear Ms. Niles, I understand you are accepting comments about the prospect of expanded passenger rail service to and from the Berkshires. As a citizen of the Commonwealth, I would like to weigh in heavily in favor of renewed east/west rail connections between Boston and the Berkshires (Pittsfield and/or North Adams). It's not just a question of commercial costs, benefits, ROI (and ratios): it's a question of knitting together the state and its people, its culture, its ability to connect citizens with each other and to anticipate and support the future of telework in Massachusetts, to mitigate global warming by reducing auto traffic on our highways, and to help transform the economies of towns and cities from the Berkshires to Boston. It's "Field of Dreams": "if you build it, they will come." The 21st century demands and will reward clean, efficient, relaxing passenger rail to and from the Berkshires — to promote and invest in Western Massachusetts's economy and to better unify the state from east to west & west to east. Thanks to the Department of Transportation for its serious consideration and support for East-West Passenger rail in Massachusetts. Very kind regards, David W. Williamstown, MA p.s.: Thank you for please not adding me to any mailing lists. CC: Rep. Smitty Pignatelli	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
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34	Anonymous	Consider a stop in Westfield, MA. Large college population would utilize this service frequently.	Thank you for your comments. We appreciate your interest in the study. Given its proximity to Springfield Union Station and the use of a 20-mile catchment area for the Preliminary and Final Alternatives ridership forecasts, it was assumed that the majority of ridership demand for new service to and from Westfield would be captured in Springfield. The potential for in-fill stations along a preferred alignment could be assessed in future analyses.
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35	William B. Freedberg	Dear Makeala Niles and Rail Study staff, I would like to add my comments about east west passenger rail.. I appreciate the vast amount of effort and funds that have been put into the state's studies of the rail system. I am very concerned that such very forward looking and ambitious proposals that are being put forth are so expensive that it will be essentially impossible to initiate any east west rail service at all during our current pandemic period of great financial stress. We are sure to be facing very strained finances for state and local governments, and certainly at the Federal level for some time. I believe it is essential to think in terms of small "PILOT" plans to initiate some small but meaningful service to see if that can attract ridership and test what the potential for more advanced levels of service can be. Under the present financial constraints there is no way that a large program, however attractive on paper, can be funded. We should advocate for starting simple and small. That seems to me to make more sense at this time than planning big and being unable to start at all. Why not start small? Our grandchildren who love Thomas the Tank engine stories learn about friendly good service provided by just Thomas and his two coaches Annie and Clarabel. Why not begin very simply with one engine and two coaches a day from where the MBTA ends at Worcester Union Station to Palmer and Springfield and over the hills to Chester and Pittsfield. Consider providing refreshments for travellers as they watch our beautiful scenery go by. Work with CSX who owns the tracks to create schedule times that work around freight schedules, and are good for East-West passenger needs without duplicating AMTRAK's Lake Shore Limited.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
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That could create some good “P.R.” for Amtrak and CSX.

We hear hopeful talk about East West rail, but too much focus on big size and enormous costs.

Can’t we begin “starting small” with something less complicated and costly. Why not begin to serve the public and learn what the ridership will be.

If starting this way proves successful with people riding and desiring more service that will be a clear green signal to move down the line towards bigger plans. This could begin in months, not years.

Starting sooner and smaller makes more sense in our present difficult times than studying and restudying bigger plans for an ideal system that would not be funded in the foreseeable future.

We could and should work on this NOW.

Why wait for years of more studies and higher start up costs?

This letter includes portions of a letter I sent to the Springfield Republican, the Berkshire Eagle, and the Country Journal a few weeks ago.

Thank you for letting me comment with my THINK SMALL thoughts.

Respectfully.
William B. Freedberg

18 Winter Street
Northampton, MA 01060

Email willfreedberg@gmail.com

36	Martin Wasiak	This might be answered elsewhere, but why wouldn't the line be extended a mere 27 miles further to Albany? Isn't Albany a major rail stop which would bring in more passengers and thus reduce costs? Not to mention make the line significantly more useful to everyone?	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
37	Nicholas Schumacher	My criticism with the results of this study and the results of many American rail studies are that people are only going to use a rail service in mass quantities when the rail service provides better and faster service than driving/bus. Based on the speeds I observed in the documents, I find it hard to believe that these benefits will be achieved from any option. Without traffic it's about 2 1/2 hours from Boston to Pittsfield. Taking a train that takes an extra hour or more is not going to be attractive to many people and is the reason why many long distance trains are not doing well in the United States. If the state wants to invest in rail, then it needs to invest with intellect, by investing in true high speed rail that can reach speeds of 150-200 mph and provide a real beneficial change to society. Accompanied by local transport options (busses) from train stations, high speed rail would get cars off the road and encourage people to take public transport over longer distances.	We appreciate your interest in the study, and thank you for your comments. With improvements along the East-West corridor and given historical congestion levels in the eastern part of the state, it is anticipated that new passenger rail service could offer travel times that would be competitive and more reliable than travel by personal automobile.
38	Clay Oshiro-Leavitt	E-W Rail is also shooting itself in the foot by stopping at Pittsfield - it should continue across the NY border and on to Albany (a metro area with a population of over 1m). By only providing service east of Pittsfield (rather than west as well), this limits the job and economic opportunities afforded to those living in Central and Western Massachusetts. By running through to Albany, this would provide travelers from Massachusetts with valuable connections to Vermont, NYC, upstate NY, Toronto, and Montreal. Furthermore, this leverages existing passenger rail infrastructure - the Albany-Rensselaer Amtrak station is a multi track, multi platform high capacity station with numerous amenities. Amtrak also has facilities for maintaining and servicing equipment in the Albany area.	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

		Both of these could be utilized, rather than requiring costly construction of lay-over tracks and facilities in the Pittsfield area. Continuing on to Albany would be a boon both for Massachusetts as well as New York, and provide the region with an integrated, connected network to numerous destinations.	
39	Anthony Daly	Dear Makaela Niles, I am writing in support of expanding East-West rail to Pittsfield. This project would of course require smart planning and massive investment, but its potential to improve congestion inside 128 and share some of the economic dynamism of eastern Massachusetts with the western side is enormous. Please give full consideration to how this project can be successfully implemented. Many thanks for your time and consideration. Best, Anthony Daly North Adams	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
40	Frederick Smith	How can the Town of 7 Railroads be dismissed from being a stop for the railroad? With the MGM Casino now in Springfield, it will help everyone involved from people who want to go there, for people who works jobs that will be needed like the taxis and shuttles, etc. With the riots that have happened and still are in the large cities, don't you think that people will want to move to smaller, quiet peaceful towns pike Palmer? It's a win-win for many people and businesses. Fewer cars on the road definitely helps too. Plus people get jobs in other areas because these small towns don't have much of a manufacturing base.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.
41	Bonnie Kimberly Shackleford	Yes, please include Palmer. This will help people in the Palmer area go to Springfield and Boston. It will save on gas and emissions. If the timing was right, I can also utilize the train to commute to Springfield for my job at Baystate Medical Center. Please help the community by including Palmer as a stop. Thank you and have a wonderful weekend.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.

42	Paul David DeVries	I am still digesting the alternatives. Right now, I am leaning toward Alternative 4 or Alternative 4/5 Hybrid. I think making travel by rail more accessible will be a good thing for the state, speaking as someone for whom mobility used to be an issue.	We appreciate your interest in the study and thank you for your comment regarding a preferred alternative. At this stage of conceptual planning, MassDOT recommends keeping Alternatives 3, 4, and 4/5 Hybrid under consideration, as additional information may be worth considering before the focus is narrowed to one or more alternatives. The next steps outlined Chapter 6 do not require the selection of one alternative.
43	Sheryl Chase	I would benefit from and east - west rail system. I live in Palmer and often must commute to the Boston area. Currently the drive time during peak hours can be more than 2.5 hours each way. Even if the rail system is not faster, I would gain the ability to work as I travel, making the commute time more efficient for me. I also feel this would reduce the effects of many cars exhaust, making a healthier environment	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
44	David Maloof	Hello . . . I'm writing in support of East-West Passenger Rail service. I know that I (and my family) would visit Boston much more often if we had this transportation option. We have lived and worked in Boston, and miss it; but driving there is reliably stressful and relatively expensive. And people from Eastern Mass. surely could use a break, and could take the train out to Western Mass. It could be an educational experience: some of them might realize that there is life and culture throughout Massachusetts. Thank you, David Maloof	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

45	Michael Follo	To Mr. Ethan Birtland: I'm interested into transportation & the proposed Pittsfield to Boston rail service & I would like to know on when the Draft Environmental Impact Statement document will be completed as well as to when virtual public meetings will be held to get feedback on the DEIS. In addition, when will construction begin on the project & since South Station is overcrowded, is the proposed service going to operate only between Worcester & Pittsfield temporary or will it still go into South Station as planned, who will operate this service & what year do you expect that passenger service will begin. I would greatly appreciate to hear back from you in regards to this project, my e-mail address is braves9@gmail.com Sincerely, Michael Follo	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. This conceptual planning study reflects a high-level feasibility analysis intended to explore and identify a wide range of infrastructure improvements and service scenarios that would facilitate new passenger rail connections between Western and Eastern Massachusetts. Chapter 6 details additional studies and analysis recommended to advance the conceptual planning stage prior to any project development actions.
46	Eileen Bauer	Phone: (617) 216-0978 regarding the East-West passenger alignment, why don't you straighten the line around Spenser, MA. Currently, it makes a big loop to the south. I realize it would require some leveling of the terrain and the taking of land but you'd eliminate the loop.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. In developing Preliminary Alternative 5, which was later refined into the Alternative 4/5 Hybrid, the central segment between Springfield and Worcester was assessed to identify the most cost-effective sections of track that could be realigned, balancing anticipated capital costs for improving the segment against its projected travel time savings.

47	Cynthia Kowalczyk	As a retired senior citizen I would love to be able to go to Boston for the day and take advantage of all that the city offers. I, along with many of my friends and relatives dislike driving the highways and crowded cities, especially I 90 especially where it intercepts with 84 and 290. As a college student I used the trains often from Springfield to New Haven and found it relaxing and where I could study or read along the way. I can see it would be very helpful for those working in the Boston area and living in Western Mass. Besides the fact that it would cut down on pollution and save wear and tear on your vehicle, especially in inclement weather. Surely would cut down on accidents caused by distracted drivers. I understand there are costs involved, but I'm sure the two parties can meet halfway and come up with a useful plan that would benefit all.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
48	David Phillips	Mr Britland - I am satisfied with the Mass DOTs recommendation for Preferred Alternative for two of the three segments: 1. Use of the MBTA-owned line between Boston and Worcester - With the upgrades already planned by MassDOT to improve the existing commuter service in this segment (including eventual electrification) it will support good quality express service for trains to/from Western Mass. With electrification it will be possible to reduce the projected 53 minute travel time shown in this report for the 44 miles. 2. Use of track shared with CSX freight between Springfield and Pittsfield - Given the relatively low ridership anticipated in all alternatives in this section this solution is not inappropriate. The use of trains with dual-mode propulsion capability would allow them to operate through to Boston with electric power. The increase in ridership that would result from the network effect by connecting with Empire Service trains at Albany-Rensselaer needs to analyzed. My primary concern with this report is with its recommendation of Alt. 3 for the mid-section, specifically the portion between Auburn and Palmer. This segment is several miles longer and has much more curvature than the the direct routing via a Mass Pike alignment considered in Alt. 6, resulting in travel time for this segment of 1:04 for Alt. 3 vs. 35 minutes shown in February for Alt. 6. The route is shown as being built with a single track in this segment making it problematic whether the proposed 9 daily trips would be achievable; clearly, there would be no ability to grow the service by operating more trains. This would make rail service totally uncompetitive with driving or, even, bus service. The likelihood that CSX would permit a significant amount of construction in this	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. This study sought to generate infrastructure and service concepts for new passenger rail service along the existing rail corridor, as well as another corridor where higher speeds could potentially be achieved (Alternative 6 and I-90). It is worth noting that, to achieve the high speeds that could be realized along the I-90 alignment, electric (or dual-mode) trainsets and electrification of the central segment would be required. To clarify, Alternative 3 proposes the restoration of missing double-track segments between Springfield and Worcester (i.e., there would be two tracks, but they would be shared with CSX freight movements).

		constrained segment is also questionable. Alt. 6 had by far the highest ridership. The bottom line is that while Alt. 3 has the lowest capital cost, it would attract very few riders and, thus would require the highest operating subsidy. The biggest advantage of the Mass Pike routing is that it would go through Sturbridge, the logical jumping off point for a new route parallel to I-84, direct to Hartford, where it would connect to the existing Springfield-New Haven route. This would create a new inland Boston-New York City route via Framingham, Worcester, and Hartford, about 18 miles shorter than the Shoreline route via Providence. MassDOT has said that hybrid alternatives (combining pieces different alternatives for the three basic segments: Boston-Worcester, Worcester-Springfield, and Springfield-Pittsfield) would be considered in this Study. However, the report contains no analysis of this hybrid, although I strongly recommended it in my comments on each previous previous presentation of interim products of the Study. It appears that the project is being set up to fail. I propose that Massachusetts and Connecticut jointly study the concept of a new railroad between Sturbridge and East Hartford, about 29 miles. Some preliminary analysis of this was performed as part of the NEC Future Study. D. Phillips	
49	Amber Smith	I live in Palmer Massachusetts it says the study has been going on for two years I've lived here for five in this is the first time I have heard of it it's now Nov. 13 2020!! My husband myself my parents and brother and sister all have season tickets to Fenway and we would absolutely love a rail stop In Palmer Massachusetts to go to these games!! Also I bet not unlike myself half of the Palmer residents don't even know about this! I'm going to ask every person that I know that lives in Palmer to see if they heard of this and I'll get back to you and let you know. The only reason I know about it is because the Palmer Journal Register gave out free papers to every resident on October 22nd 2020	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.

50	Nathanael Nerode	Supplementary comment: This editorial from the Albany (NY) Times-Union newspaper editorial board tells you what you need to be studying! https://www.timesunion.com/opinion/article/Editorial-Hey-what-about-Albany-15723667.php	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
51	Benjamin Turon	Dear Sir/Madame, Overall, I'm pleased with the alternatives presented by the East-West Rail Study – I think double-tracking the entirety of the existing formerly double-tracked Boston & Albany railroad now owned by CSX as laid out in Alternative 3 is the most expedient route going forward, providing the biggest bang for the buck. I'm not in favor of dedicated passenger tracks when clearly “higher speed” passenger trains and freight can share a upgraded double-track line, as seen across the world from the NYC-Albany Hudson Line to the West Coast Main Line in the UK. Major track realignments as put forward in Alternatives 4 and 4/5 should only occur if MassDOT or Amtrak purchases the CSX mainline Worchester-Springfield and ties in a curve realignment and grade separation rebuild program with electrification to enable through “Inland Route” service with the current New Haven-Springfield CTrail service extended to Boston and a number of Amtrak’s Northeast Corridor ‘Regional’ services traveling Virginia-Boston via the new Inland Route. As opposed to building and enacting a high-frequency corridor service from outset, MassDOT may also instead want to consider the approach adopted by Virginia, which has over the past decade had a program of adding one-at-a-time passenger train frequencies to routes already served by an existing Amtrak long-distance trains, a strategy requiring a smaller initial upfront capital investment compared to building an entire new high-frequency corridor at once. For example, Virginia in 2012 leveraged the existing Amtrak Washington-New Orleans ‘Crescent’ service over the freight tracks of the Norfolk Southern to extend an existing Boston-DC ‘Northeast Regional’ train to Lynchburg VA. With ridership and revenue above expectations and covering operating costs, Virginia is now working on extending a second Northeast Regional frequency to Lynchburg. Finally, any future follow-up study needs to examine Albany, NY as the logical terminal for a future East-West rail service through the Berkshires. At Rensselaer there is also an existing Amtrak crew base, maintenance facility, and currently an operating food service	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph. As noted in Chapters 1 and 6, there is additional work to be done to fully complete the conceptual planning stage for East-West rail. This work includes discussions with CSX about certain physical/operational elements and requirements. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

		commissary – eliminating the need to build any of these facilities in Pittsfield. Albany-Rensselaer is also Amtrak's ninth-busiest station, serving a metro region of over a million people, and providing connections to cities across New York City, Upstate NY, Vermont, Montreal, and Toronto. Including it would considerably boost ridership and revenue compared to a train terminating at Pittsfield – greatly improving the cost-benefit ratio at little additional cost in additional infrastructure. With all the questions, criticisms, and counterproposals that the East-West Rail study has generated, furthermore in-depth research and planning is warranted. I support white paper" on the governance, organization, and management of passenger rail within the Commonwealth, also a reexamination of ridership and cost/benefit estimates, and more detailed engagement with local businesses, Amtrak, CSX, and New York State. I hope that this study is not a dead end, another pile of paper to gather dust, but the end of the beginning in the process of bring high quality passenger rail service to the Boston-Springfield-Albany corridor. Benjamin Turon Ballston Spa, NY	
52	William N Traylor	Train service between Pittsfield and Boston should be increased immediately. Such a step would give a real world test of the desire for this service. The steps necessary for this step to be taken do not seem to be insurmountable. Let's at least have something tangible come out of all of this discussion.	As noted in Chapters 1 and 6, there is additional work to be done to fully complete the conceptual planning stage for East-West rail. This work includes discussions with CSX about certain physical/operational elements and requirements, understand the governance options for expanded passenger rail in Massachusetts, more detailed study of economic and community benefits and impacts, and evaluation of funding sources and strategies.

53	Dalton G Dwyer	Would it be possible to discuss some of the economic and quantitative assumptions used in the study? There are a number of assumptions that, as an investment banker used to working with DCF, could be challenged, or at least a discussion of sensitivities on these assumptions might be included. I would be pleased to have a conference call of circa one-hour to review the issues in mind. Thank you, Dalton Dwyer	We appreciate your interest in the study, and thank you for your comments. Details regarding the assumptions and rates used within the benefit-cost analysis (BCA) presented at the end of Chapter 4 can be found in the Benefit-Cost Analysis Technical Memorandum, including the undiscounted values for each major component. As this was conceived as a transportation study, the BCA was conducted in accordance with USDOT's federal guidance for the evaluation of transportation projects for potential discretionary grant funding, which utilizes 7% as the standard discount rate. The Benefit-Cost Analysis Technical Memorandum will be made available on the study website.
54	Steven E. Miller	We really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail. In addition, MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

55	Peter Traub	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
56	Kyle pobieglo	I travel to Worcester an Boston daily an a train from Palmer would be amazing	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
57	Philip Orenstein	Its a very impressive, well intentioned study. The final recommendation is based on a cost benefit analysis, while appropriate for this study, is driven by several highly subjective assessments and quantifications. However, certain facts are quickly evident, such as the high cost (\$2.5 - \$4.5 bln), ~65% of ridership is Springfield to Boston and the modest projected ridership. The harsh reality is that the tracks in this relatively low ridership area will cost the same (looking at the big picture) than those with much higher ridership between larger cities. While I would be delighted to use this service, at this point in time I would conclude that such a significant infrastructure investment is better directed towards newer, less expensive and more flexible technologies. This would include hybrid and ultimately electric bus service and the required charging capacity. This could be implemented faster and continuously modified to adapt to shifting populations and traffic patterns. This approach is less appealing in terms of highway traffic congestion, but the impact of COVID on commuting patterns requires a broader reassessment of these considerations.	We appreciate your interest in the study, and thank you for your comments. Although buses are more flexible than rail, bus service may not offer travel times that are competitive with travel by automobile given historical congestion levels in eastern Massachusetts. MassDOT will be evaluating how travel patterns and congestion may change and continue to change due to the pandemic across the state and across all transportation modes.
58	Christopher Franks	I believe MassDOT should focus on immediate steps that would improve connectivity for western Mass. For instance, an additional round trip to Pittsfield in the morning and evening - to complement the existing daily Amtrak Lake Shore Limited - would be relatively simple and low cost, and I understand that detailed specifications for such a service are already being discussed among rail advocates and experts. I would like to see cooperation between all parties to implement this improvement as soon as possible.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
59	M Linehan	This West to East train travel is vital. Pittsfield was foolishly left out of connection to 90 a: when it was built b: when the state gave up on a bypass route(hurting North Adams as well). Isolation has kept this city struggling. Looking west see how well Albany is	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

		connected to everywhere....looking east Springfield has some connections while Worcester enjoys more. Western MA is only 100 miles from the Boston Harbor...why is it treated so poorly?	
60	Tyler E Swanson	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans. Furthermore, MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Additionally, I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. I also want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail. Finally, I am concerned about two aspects of the financial analysis. First, the study discounts future costs and benefits at 7%, which is very high in terms of today's economic	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.

		environment and market observable rates. In theory, the discount rate should have its basis significantly weighted in terms of costs of capital, which are at historic lows across nearly all investment activities. The discount rate used in the UK government's economic analysis for the HS2 line, for example, is 3.5%. I would like to see MassDOT provide a cost/benefit analysis using a range of discount rates, as a different and in fact more realistic rate could significantly enhance the viability of the project. In addition, in the table on page 101, the East-West line residual value (again discounted at 7% to a present amount) ranges from \$40 million to \$77 million, depending on the investment option developed. This amount seems low for what would then be a fully mature rail line. According to MassDOT, the residual future value represents 25% of the original cost of the East-West project. For instance, if the option selected had an original cost of \$2.0bn, the analysis assumes that in 30 years (2050) the residual economic value of the line is only \$500m. This amount is then discounted at the disadvantageous 7% rate. I believe that these numbers need to be revisited and revised to give a true picture of potential economic impact of East-West rail.	
61	JUDITH BECHARD	There is almost NO public transportation in the town of Palmer. To get anywhere east or west of Palmer we need to drive there. Although the trains might not provide 'commuter for or all, if we are ever going to reduce pollution & commuter congestion we need to establish a better transportation infrastructure. Train travel is something we need to consider.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.

62	Sheila B. Irvin	want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As noted in Chapter 6, a more detailed study of economic and community benefits and impacts is recommended.
63	James Kupernik	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to NYC, upstate New York, the Mid-Hudson region, Vermont, and Montreal. As a business leader in Pittsfield, this would make it easier to source talent from the capital region and have easier access to our headquarters in NYC The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As noted in Chapter 6, a more detailed study of economic and community benefits and impacts is recommended.
64	John Masiero	There was a time when General Electric employees in Pittsfield could take the train to Boston in the morning for a meeting/conference and be home again the same day. Today this would involve about five hours of driving and the expense of parking in that congested city. Light-weight electric rail could be a solution.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. Electrification was investigated along the I-90 corridor within Alternative 6. However, the horizontal and vertical geometry of the existing rail corridor largely limits maximum achievable speeds in Alternatives 1-5 to a level that can still be attained using modern diesel equipment.

65	Lisa A Powers	MassDOT should focus on immediate steps to improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost. I understand specifications are being discussed. I'd like to see all parties work to implement this and also work with New York on service to Albany, with Pittsfield as an intermediate stop. Albany is one of the country's busiest Amtrak stations, offering connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
66	Brian Bissell	Building climate-friendly infrastructure for the long term health of people and economies is a no-brainer I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
67	Benjamin, Springfield Resident	I am a lifelong Springfield resident. I want to be able to easily take the train to Boston for leisure, shows, and nightlife (assuming those become a thing when the pandemic is under control). The Pike is annoying and I rack up a huge amount of mileage on my car, and the bus is not fast or convenient enough. We should have train service as an option for Springfield Residents. We already have to go east for everything else - people go east for work, education, restaurants, nightlife, etc. There are just more amenities out East because central and Eastern Mass have become so well developed and Western Mass is still more rural/suburban/xurban. We want easier access to those amenities. I would take the train on weekends if I didn't have to drive. If the commonwealth has to be culturally so Boston-centric then those of us out west want to be able to participate	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

68	Steve Strauss (NYS Council Representative – Rail Passengers Association)	Thank you for the opportunity to comment on MassDOT’s East-West Rail Study. The document represents an informative first step with good documentation of existing conditions, understandable maps and tables and identification of three reasonable alternatives. The Study does a good job of breaking the project into the three logical and distinct segments (BOS to WOR; WOR to SPG and SPG to PIT) and explaining the particular situations, options, costs and travel times for each segment. That said, MassDOT and their primary consultant, WSP, seem to have set up the study, to examine the costs and benefits of expanding east-west passenger rail service, so as to portray the idea in the worst possible light. Two primary decisions by MassDOT result in seemingly high capital costs and low ridership creating low cost-benefit scenarios for improving passenger rail service. First, MassDOT established the western terminus of the study in Pittsfield, a city of 44,000 people rather than Albany, NY, a city of 97,000, in a metro area of well over 500,000. Albany is the 10th busiest Amtrak station in the United States and has passenger rail connections to New York City, Chicago, Montreal, Rutland (VT) and Toronto. In addition, the Albany-Rensselaer station has existing train storage, maintenance facilities, crew quarters and a commissary that could be made available for expanded service to Boston at a likely lower cost than building new facilities in either Springfield or Pittsfield. Extending Massachusetts East-West service an additional 38 miles to Albany provides greatly enhanced network connectivity and a much larger terminal ridership market for trip origins and destinations. It is critical that New York State DOT’s Rail Division be brought into this effort. Second, MassDOT has presented the full build-out costs of each alternative without acknowledging that most states take a much more incremental approach to improving intrastate and interstate passenger rail service. If you look at two very successful state-focused expansions of passenger rail – North Carolina’s Piedmont service between Raleigh and Charlotte and Maine’s Downeaster, both have had significant initial capital costs, but both have expanded incrementally, growing service and making additional capital investments in line with growing ridership over an extended time period. The study demonstrated that the cost projections are in-line with what the	Thank you for your comment. We appreciate your interest in the study. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As noted in Chapter 6, project phasing could be an opportunity to respond to an interest in change sooner rather than later and can also be evaluated in the context of funding opportunities.
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Commonwealth is experiencing on other rail corridor improvement projects. MassDOT should have provided a more positive tone to the study and included Albany as the western terminus to have presented a more realistic picture of how to expand passenger rail service across the Commonwealth.

Governance and Operations

Discussions of how the Commonwealth might initiate and/or operate expanded east-west passenger service omitted or downplayed expansion of a Rail Division within MassDOT. Rail divisions are a fairly common practice for states with PRIIA Section 209 state-supported Amtrak service. North Carolina and Michigan oversee extensive state supported passenger service operated by Amtrak. Connecticut uses a third-party operator overseen by Connecticut DOT for CT Rail. Massachusetts DOT currently participates in the Section 209 State-supported trains program as well as the cost-sharing arrangements of Section 212 pertaining to the Northeast Corridor.

Accordingly, in the short-term, MassDOT could add a second daily round trip between Albany and Boston operated by Amtrak and funded by the Commonwealth through the Section 209 program. While Amtrak is a high cost provider, this is the fastest way to respond to the interest of Western Massachusetts in having greater connectivity with the Boston area. This approach also requires negotiation with CSX Transportation.

Housing Costs and Other Economic Benefits

The report acknowledges that more work needs to be done to identify the economic benefits of enhanced east-west connectivity through frequent passenger rail service. Similarly, more work needs to be done on how the high cost of housing limits economic growth in the Boston area and how reductions in travel time between Worcester and Boston and perhaps Palmer and Boston could expand the availability of affordable housing by expanding the Boston commuting shed. This is a real, measurable benefit that should be considered in the next stages of this project.

Suggested Enhancements to This Study or Future Studies/White Papers

1. Formally bring New York State DOT into the planning process.
2. Develop more incremental approaches to implementing one of the 3 recommended options.
3. More clearly state the assumptions on high and low level platforms for each station.

		(Unfortunately, CSX generally restricts high level platforms in mixed freight and passenger use territory.) 4. Detail station parking assumptions associated with ridership forecasts. 5. Introduce discussion of fare revenue to meet operating costs. The Commonwealth of Virginia is meeting it's "above the rail" operating costs from fare revenue for state-supported extensions of NEC Regional train service in several corridors. 6. Provide more details on 10% transfer assumptions to CT Rail and identify transfer assumptions in Boston to NEC service and the Downeaster. 7. In funding options, note that FRA Federal-State Partnership for State of Good Repair Program is generally only available for use on publicly-owned assets and those not in a State of Good Repair. 8. In funding options, note that the BUILD grants program operates at the agency level and is not specific to any U.S. DOT administration (FTA, FRA or FHWA).	
69	Tracy Ducasse	It would be wonderful to have a rail system that stopped in Palmer, it would cut down exhaust polluting the environment. It would be great to take the train into Boston, and go points further from there. I was an extensive traveler before Covid, and have always used public transport where ever I have been. If places like the UK can have a train system that benefits rural areas, why can't we. It would be a great asset.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.
70	Paula Geier	Worked in inspection for Csx	Thank you for your comment.

71	Jim Brown	I believe the long-term material, human, and environmental benefits of statewide passenger rail will far outdistance any upfront costs. Especially if much of the track is already laid. It appears to me that any CSX conflicts will be resolved over time through experience and planning. Transit will benefit in having alternatives, and people's quality of life will improve by lessening the attachment to the automobile. Finally, the economy will be stimulated via increased movement of goods (non-CSX) and people.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
72	Anezka Sebek	I don't live in MA but I do live in Kingston, NY. I have been frustrated with the lack of rail service on the West Coast of the Hudson. The reason the East Coast counties are wealthy is because of the rail line there. To meet the END OF FOSSIL FUEL in the US in ten to twenty years, we have to rebuild our RAILWAY INFRASTRUCTURE. It will save money for people to commute AND it will prevent pollution. We need an electrical grid powered by wind and sun to drive the trains...then we will all make the planet more liveable.	We appreciate your interest in the study, and thank you for your comments.
73	Katie Challinor	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state.
74	Karen Christensen	I am troubled by two aspects of the financial analysis. First, the study discounts future costs and benefits at 7%, which is very high in terms of today's economic environment and market observable rates. In theory, the discount rate should have its basis significantly weighted in terms of costs of capital, which are at historic lows across nearly all investment activities. The discount rate used in the UK government's economic analysis for the HS2 line, for example, is 3.5%. I would like to see MassDOT provide a cost/benefit analysis using a range of discount rates, as a different and in fact more realistic rate could significantly enhance the viability of the project. In addition, in the table on page 101, the East-West line residual value (again discounted at 7% to a present amount) ranges from \$40 million to \$77 million, depending on the investment option developed. This amount seems low for what would then be a fully mature rail line. According to MassDOT, the residual future value represents 25% of the original cost of the East-West project. For instance, if the option selected had an original cost of \$2.0bn, the analysis assumes that in 30 years (2050) the residual economic value	Thank you for your comment. We appreciate your interest in the study. In January 2020, U.S. DOT released its Benefit-Cost Analysis guidance, including guidance related to residual value and discounting. Based on this guidance, and in accordance with OMB Circular A-94, a 7 percent discount rate is used for this analysis.

		of the line is only \$500m. This amount is then discounted at the disadvantageous 7% rate. I believe that these numbers need to be revisited and revised to give a true picture of potential economic impact of East-West rail. I also want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social, and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	
75	Karen Christensen	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans. To make this happen successful, MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal. In addition, MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.

76	Rachel Lucy Christensen	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
77	Nicholas Russo	Thank you for your time in taking on this important study. As a native of Berkshire County, having a non-automotive transportation option to connect to the rest of my state is very important to me. With Amtrak service now reduced to three days per week, the options are now limited further. Peter Pan and Greyhound remain alternative options, though they do not improve on travel times compared to the Mass Turnpike. The one aspect I would very much like to see considered is a connection through Pittsfield to Albany, rather than a terminus at Pittsfield. With a population of 100,000 and multiple Amtrak connections to downstate, the Empire Corridor, and Canada, Albany would provide a large boost to any cost/benefit considerations of East-West service. I am not sure why this scenario was not considered in this initial study, but it is not too late. A rail connection between two state capitols would be a boon to ridership, and help provide more revenue to cover costs of service to less profitable stations. I ask you to please consider this scenario in the study alternatives, even if it means extending the study or comment period. It think it would be worth the investment. Thank you!	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
78	Charles O'Brien	We desperately need more high speed rail as an answer to global warming. I would use the East-West rail at least a few times a year. I currently live in Boston.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

79	Martha Klein	I own an apartment in Great Barrington MA. Taking the train to Boston from Pittsfield is the greatest thing, but is not super convenient right now. I would travel by train frequently to Boston and NYC, because driving is costly and inefficient. MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Trains are an ideal form of transportation that can help us meet our greenhouse gas reduction targets. I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
80	Stephen Benedetti	I think a rail stop in Palmer could greatly benefit the economy of this often overlooked part of the state.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.
81	Melanie Drewnowski	This would have many layers of benefits from work opportunities, extracurricular, educational while also increasing revenue for Boston plus decreasing emissions.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

82	Ben Hood and Anne Miller	Comment to MassDOT on [DRAFT] East-West Passenger Rail Study Submitted by Citizens for a Palmer Rail Stop 11/19/20 In June 2020, Secretary Pollack expressed the hope that the East-West Passenger Rail Study would lay the groundwork for moving the idea of higher speed rail between western Massachusetts and Boston by way of Worcester from a study to an actual project. As the study concludes, MassDOT should be looking for a way to create a shovel-ready East-West rail project at a time when the Federal government is likely to develop an infrastructure bill to stimulate the economy and make much-needed improvements to the country’s transportation systems. Unfortunately the current East-West Passenger Rail Study alternatives are unlikely to qualify for Federal funding due to their high cost and reputedly low benefit, resulting in minimal benefit cost ratios. All that is needed to create an East-West rail project eligible for Federal funding is to revisit and revise the Northern New England Intercity Rail Initiative (NNEIRI), released by MassDOT in 2016. The NNEIRI study provides a blueprint for affordable, higher speed train service between Boston and Springfield. MassDOT should take the NNEIRI plan off the shelf, revise it to extend service west to Pittsfield and Albany, and make it a shovel-ready project that is fully qualified for Federal funding. We encourage MassDOT to develop a “New NNEIRI” project to address the great need of Massachusetts for frequent train service running west from Boston to Springfield and Pittsfield, and connecting to north-south service at Springfield, and to UMass/Amherst and UConn/Storrs via bus and future train service at Palmer. Here are specific ways in which a “New NNEIRI” project could improve on the East-West Passenger Rail Study alternatives: 1. The population of Worcester is 185,428 (metro area pop. 923,672), and the population of Springfield is 153,606 (metro area pop. 631,982). They are the 2nd and 4th largest cities in New England. It is outrageous that these two cities are barely connected by passenger rail in the 21st century. MassDOT should make it the highest priority of a	Thank you for your comment. We appreciate your interest in the study. The East - West Passenger Rail study area and goals were different from NNEIRI, and were intended to explore potential pathways towards additional passenger rail service between Western and Eastern Massachusetts. The study leveraged analysis from the previous NNEIRI effort, and also developed more detailed capital cost estimates for alignments and technologies, as well as speeds and travel times that were not investigated within NNEIRI. As noted in Chapter 6, the East - West Passenger Rail Study is a significant step forward in realizing the potential for enhanced service within the corridor. The next steps identified in this chapter continue to advance the conceptual planning phase for East - West Passenger Rail.
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- shovel-ready “New NNEIRI” project to implement frequent train service between Springfield and Worcester.
2. To benefit the entire Commonwealth, a “New NNEIRI” project should extend intercity passenger rail to Pittsfield (city pop. 42,142), and Albany, NY (city pop. 96,460; metro area pop. 883,169). The added connection to Albany will more than justify the additional cost of service west of Springfield.
3. We appreciate the inclusion in the East-West Passenger Rail Study of infill stops in Palmer and Chester to connect the vast rural areas of Central Massachusetts and the Hilltowns to all the cities west and east. Every train in the NNEIRI plan would have stopped in Palmer; and every train in a “New NNEIRI” project should stop in Palmer and Chester.
4. A “New NNEIRI” project should include plans for temporary bus and subsequent rail connections to the Flagship Campus of the University of Massachusetts in Amherst, and to the University of Connecticut in Storrs, both of which will be served by direct connection at the east-west stop in Palmer. UMass Amherst: 24,209 undergraduates; 7,141 graduate students; 1,462 faculty and 4,741 staff. UConn: 18,847 undergraduates; 7,097 graduate students; 9,620 faculty and staff.
5. Demands for “high speed rail” in effect derailed the original NNEIRI plan (itself originally a high speed study), delaying rail service to Springfield well beyond 2020, the year in which NNEIRI-envisioned service could have begun. No question the United States should be building high speed rail networks nationwide, but in Massachusetts higher speed rail now can lead to high speed rail later. A “New NNEIRI” project could start train service with speeds less than 90 mph in order to reduce the much greater capital expense required to reach true high speed service using the CSX right-of-way. By starting with less costly, “higher speed” service, MassDOT will be able to better evaluate the need for train service along this route before making an enormous capital investment.
6. The East-West Passenger Rail Study narrows the scope, low-balls the ridership, inflates the costs, and underestimates the benefits of passenger rail service between Boston, Springfield, and Pittsfield. A “New NNEIRI” project would address all of these failures by expanding the scope to include Albany, NY; by basing ridership projections on more comparable proxy markets elsewhere in the U.S.; by reducing capital costs to cover only

		improvements needed to run less than 90 mph trains west of Worcester; and by calculating and including in the benefit/cost analysis all of the economic and environmental benefits that will accrue from expanded, frequent train service spanning our state. A “New NNEIRI” project will require oversight and planning to realize its full potential by connecting to regional and interstate public transit services. As a first step, the legislature and MassDOT should create a passenger rail authority to coordinate and develop statewide passenger rail service on the Inland Route, the Knowledge Corridor (home to the Valley Flyer pilot service), the Northern Tier, the Central Corridor Line, and the Housatonic Line. The authority could also collaborate with CTDOT, NYSDOT, and VTrans to ensure seamless connection to passenger trains running across our borders. Ben Hood and Anne Miller 60 Buckland St. Palmer, MA 01069 413-283-2141 Citizens for a Palmer Rail Stop http://www.palmertrain.org palmertrain@gmail.com	
83	Dan Gagner	This would be such an incredible opportunity for the state to expand west. I’ve worked for 8 years commuting from Palmer to Boston Children’s Hospital. This would be a game changer for me.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
84	Elise Lennon	Rapid and frequent East-West rail travel is essential for the economy of Western Massachusetts, and will also provide much easier access for tourism travel to Boston from Western Mass.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

85	Tom Hutcheson	Broaden Cost-Benefit Considerations November 19, 2020 Thank you for the opportunity to comment on the East-West rail line study. This comment calls on the Commonwealth to produce a comprehensive infrastructure plan and to advocate in Congress for a change to the current reliance on solely financial cost-benefit analyses, as they are detrimental to the public interest. I urge the Commonwealth to produce a comprehensive and integrated transportation plan designed to channel infrastructure development into forms suitable for the long term. Having individual projects stand or fall without considering their place in an overall long-term policy and plan is inefficient and a poor use of taxpayer dollars. The Commonwealth is a whole, and decisions made with smaller perspectives are not helpful in the larger term, which is after all the province of public policy. Infrastructure development means not only transportation infrastructure, but transportation within the larger economic, social, and ecological environments. Projects that benefit multiple goals can and should be prioritized over projects that are designed to solve only smaller problems. The world is complex, and the “siloing” of issues is counterproductive to good public policy. This project (no doubt among many others) provides an opportunity to break out of that habit of thinking incorporate broader goals. The benefits of such planning must be measured in terms of meeting multiple policy goals, not simply financial cost. While some may see this as a luxury not provided the private sector, it is a necessity for public investment, as the efficiency of meeting multiple public policy goals is a different kind of efficiency from getting a low bid for a particular product. The goals of increased housing availability, job opportunities and broader economic development, rural equity, and mitigating climate change are all assisted by greater rail transportation. Ridership estimates, even for several years out, measure just a small part of the benefits of an expanded rail system—of which this project is only one part, if a necessary one for the southwestern part of the state. To further reduce those estimates of a partial benefit by not including induced ridership is to willfully blind ourselves to the greater range of benefits. Similarly, without including the benefits of avoided carbon emissions, job site flexibility,	Thank you for your comment. We appreciate your interest in the study. As noted in Chapter 6, the East - West Passenger Rail Study is a significant step forward in realizing the potential for enhanced service within the corridor. The next steps identified in this chapter continue to advance the conceptual planning phase for East - West Passenger Rail, including more detailed study of economic and community benefits and impacts.
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		and access to affordable housing (to name only some of the factors that should be included in a comprehensive policy), any solely financial cost-benefit analysis, while a necessary part of the plan, is short-sighted in today's world of integrated solutions. I understand that the Commonwealth relies for major transportation projects on funding from a federal system that mandates such an analysis and insists on limiting assistance to those projects proving financial benefits. It is therefore essential that the Commonwealth work with its representatives in Congress to change this myopic perspective. I am copying my Representative and Senators on this comment and request that those considering these comments urge the Commonwealth to make the same argument to the Massachusetts delegation. Still, unless the Commonwealth is serious about addressing the ecological and social dimensions of sustainability (which includes economic development), relying on such cost-benefit analyses as those made in this study will not be sufficient to protect itself and its citizens. I doubt that all benefits can be monetized. As demonstrated by this study, acting in the public's short-term financial interest can and will do more harm than good to the public's long-term economic and ecological interests.	
86	Megan Whilden	I want to highlight the MassDOT's linear approach when we really need systems thinking when it comes to the benefits of passenger rail. The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. Connections to Albany, New Haven, and Montreal will amplify benefits even more. These expanded economic, social,	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

		and environmental benefits need to be properly counted in order to show the true viability of East-West Rail.	
87	Monk Schane-Lydon	Ultimately, for me, the train has to be about saving time and convenience. It takes me 2.5 hours to drive to Boston, and I can then go wherever I want in the city. If the train can get me there in under 2 hours, I'm interested. Especially for the ride back. If I take the train to Springfield, I'd want transportation from there to sites in the area. I wouldn't want to be dumped at the train station, with no way to get to the mall. The train should be a faster, cheaper alternative to get from A to B. Anything less is a waste of time.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
88	Cricket Saurel	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. I also feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.

89	Jeffrey Nathan	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible. Sincerely, Jeffrey Nathan	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
90	Rosemary Starace	Investment in passenger rail should be given priority as Massachusetts develops plans to address climate change. Transportation now contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy. Expanded passenger rail service is a necessary part of both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). The current proposals don't look at the amplification of benefits that will come from new connections in Springfield and Pittsfield. The rail system that is taking shape - with new services like the Valley Flyer, upgrades underway on the Housatonic Line, and proposed projects like the Northern Tier Line - will be more than the sum of its separate parts. The MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
91	Charles Kenny	I believe the first effort should focus on high-speed freight trains bound for the mid-west and west. Capturing more of the container market would improve Boston's port standing, give Pittsfield an opportunity to manufacture high speed rail equipment, and set the stage for later, less profitable passenger traffic.	We appreciate your interest in the study, and thank you for your comments.

92	John R Schreiber	The western part of Massachusetts is economically depressed and cut off from the rest of the state by lack of transportation and inclusion in regional NY State cable news as opposed to Massachusetts. Establishing an east west transportation corridor will re link the state together, encourage economic growth and provide lower cost housing to the Boston Metro area. A complete win-win.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
93	David V Walker	We really need this train in Massachusetts! All the way to Pittsfield! Maybe eventually even to Albany. Fastest options should be prioritized! Relieve the pressure on the Boston housing market! Revitalize the economy of western mass! The berkshires are beautiful, and doing this project will bring in loads of visitors and tourists and artists and the like. Add the housatonic railway as well!	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
94	Lisa Andersen	Having seamless rail access to Boston from the Berkshires provides a vital connection that would help stabilize the economic health of Berkshire county. Drawing visitors from the Boston and east coast allows Massachusetts to keep more of its disposable income in-state, and provides greater reach for the many small businesses that reside in the Berkshire region. The housing market would also grow. This is an important piece of infrastructure that helps to grow the greater state community.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
95	Kristin Hatt	The East/West rail service must extend from Investing in infrastructure for a train that goes from Boston through the Berkshires all the way to Albany to create the most efficient and ultimately productive and successful transportation system for the citizens of the commonwealth to grow together, seems to be a common sense approach to the 21st century problems we face. To reduce the number of cars on the road on a given day in the cities, but make them accessible to the citizens who need to visit, ease the highway congestion and emissions that causes, and reduce the stress of travel. Most importantly the East/West Rail will allow other communities outside of Boston and Worcester to benefit from the economic growth that a well planned mass transit system creates like a pipeline. Western Massachusetts, including the Berkshires, needs to be plugged into this pipeline.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

96	Barbara Palmer	Thank you for the thorough study on East-West Rail, and for the opportunity to comment. As a long-time resident of the Berkshires I am an eager supporter of infrastructure initiatives that further smart growth in our beautiful region and make it possible for the Berkshires to be vibrant economically in addition to being a cultural and outdoors mecca. Future generations need places to live and work away from the coast. Mass transit has to be part of that infrastructure. Mass transit is a component of addressing climate change in addition to accessibility. In the high-population northeast we must have foresight in planning infrastructure away from the coast. Rail is a long-term solution for those dual challenges -- climate and accessibility -- and one that is used in most developed countries to great positive effect. I was shocked that the presentation showed a negative impact of the rail project on air quality. The speaker explained that the engines run quite dirty. While electrifying the line may not be feasible, investing in high-efficiency, clean technology is key. Our cars, airplanes and airports are not 50 years behind the rest of the world, and our rails shouldn't be either. I am disheartened that the plan did not make a recommendation to move forward. On climate change and on the regional economy, we don't have time to lose. Please invest in our future with state-of-the-art rails now. It is an investment that has a long life, and our children will be grateful for our foresight and care.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state.
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97	Andrew Jennings	After reviewing the East-West Study Draft Report I realized how timid it was. Recommendations were few and most decisions were punted until further research was done. Much of the additional research could have been included within the scope of this study. This timidity may result in the consignment of this study to a shelf to gather dust. Being overly cautious kept ridership estimates and benefits low, likely overestimated costs, and slowed any implementation of the service. The stated central question of this study is “How can we connect people in western Massachusetts with central and eastern Massachusetts using a passenger rail service that provides fast, frequent, attractive service in a cost-effective and achievable manner?” With this central question in mind, only alternatives for trains operating between Pittsfield and Boston were studied. Bold consultants would have quickly recognized that such an operating plan would likely not be as cost effective as a service between Albany / Rensselaer and Boston. Such a service would not only open up markets by connecting to the existing Amtrak Empire Service (including the market to be served by the proposed Berkshire Flyer) it also holds the potential for significant cost savings because Albany / Rensselaer has service facilities, a crew base, and the potential for equipment sharing that would not have to be duplicated at Pittsfield or Springfield. The East-West study should have included at least a preliminary review of this option. Another area where the study was timid was it apparently used CSX’s engineering standards for shared track to develop what changes were required for passenger trains operating in certain speed ranges. Those standards did not appear to be independently reviewed for their reasonableness nor was any account made of the benefits such changes would bring to CSX’s operations were considered. Such acceptance likely increased projected costs. I understand why the Downeaster and the Hartford Line were used as proxies to project ridership. But I wonder if those proxies understate the potential ridership as the Berkshires have unique cultural attractions that adds to the potential ridership. Certainly, if the operator of the service can add Friday night and weekend surge capacity the proxies likely understate the potential ridership. This project has a number of potential partners who should be interested in sharing the ridership increases that come from the improved network connectivity, and who should be interested in the cost efficiencies that can come from sharing facilities and equipment,	Thank you for your comment. We appreciate your interest in the study. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph. In January 2020, U.S. DOT released its Benefit-Cost Analysis guidance, including guidance related to project benefits. As noted in Chapter 6, more detailed study of economic and community benefits and impacts is recommended.
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and from improved utilization of fixed facilities. The potential benefits from partnering with MBTA, Amtrak, or CT rail were not highlighted.

Bringing Massachusetts together with East-West passenger rail service has benefits beyond the transportation benefits calculated in the study. For international travelers beginning or ending their journeys in the Berkshires, Logan Airport competes with Port Authority airports. Western Massachusetts residents seeking the expertise of teaching hospitals now are indifferent to hospitals in the Boston area or in New York City. The Berkshires would attract more visitors from eastern Massachusetts if better non-auto transportation options were available. East-West rail would make Massachusetts more competitive.

Feeder bus service may enhance the proposed service. Although preliminary alternatives 1, 2, and 5 which had all East-West rail passengers traveling west of Springfield transferring to bus did not make sense, specific markets might work better with a bus transfer. Specifically, passengers with an end of their journey in Lee or towns south of Lee could have a faster trip using a feeder bus to Springfield or Palmer as they would not have to travel all the way to Pittsfield to catch the train. Similarly, a feeder bus from Amherst to Palmer might be advantageous to travelers. The impact of an integrated bus /rail network was not explored in this study.

Decision makers should also keep in mind that East-West rail has synergies with other projects designed to expand the passenger rail network. East-West rail would complement restoration of rail passenger service on the Housatonic Line. Not only would some passengers connect between the two services, but the first / last mile infrastructure developed for one service would be used by passengers utilizing the other. Similarly, plans to extend a Downeaster service to New York City become easier to implement if passenger rail service exists on the Boston and Albany route between Springfield and eastern Massachusetts.

I believe that an East-West passenger rail service has far better potential than this draft study indicates. The benefits are understated, and the costs are overstated.

Ironically, the pandemic has created an opportune time to quickly implement a variation of preliminary alternative 3. Rail freight volumes are down, and Precision Scheduled Railroading has been implemented making more slots potentially available that could be

used for passenger service. With revenues down, CSX should be looking toward additional revenue to keep its operating ratio in line with investor expectations. Track rental payment from passenger service could provide some such revenue. Rail passenger volumes are much lower than they were pre-pandemic, potentially allowing existing locomotives and cars to be used for an east west service even with additional social distancing on existing services.

If the Commonwealth were to act boldly and generate excitement for this project with potential partners ranging from New York State to the MBTA, it is conceivable that a pilot East-West passenger rail service could be operating as a COVID-19 vaccine is rolled out to the general population.

Let's be bold. Let's put people to work building a better rail passenger network in Massachusetts.

1) Even this question is timid as it minimizes the desire of those in central and eastern Massachusetts to access western Massachusetts

98	Massachusetts Sierra Club	The Massachusetts Sierra Club simply urges you to commit to East-West Passenger Rail and to develop and implement a plan to achieve it as soon as possible. Our highways are operating at overcapacity. Massachusetts is home to the first, second and fourth largest cities in New England all of which are located along the congested I-90 corridor. Yet vehicles are the overwhelming mode choice along this route because other mobility options barely exist west of Worcester. Worcester and Springfield must be well connected by rail for reasons of equity and economic development. Finally, given the enormous volume of travel on the Mass Pike, we should be using this project as an opportunity to help meet the Global Warming Solutions Act by reducing intercity travel by private vehicles. The Draft East-West Passenger Rail Study has so many limitations that it is not a strong basis for making a decision. It would have been better if the East-West Study had more closely resembled the Northern New England Intercity Rail Initiative (NNEIRI). The Sierra Club instead suggests that you reverse the goal and find a solution with a combination of ridership and costs that will make the project's Benefit-Cost Analysis sufficiently attractive to the US DOT so that it will receive approval for Federal funds. This could be done through a wide range of options that could include: • Include ridership synergies with other routes such as the Vermonter, Hartford Line, Valley Flyer and Berkshire Flyer. • A marketing plan to increase ridership. • Extend East-West service to Albany, which would enable travellers from Boston to Pittsfield to enjoy numerous new destinations such as Montreal to the North, Buffalo and Toronto to the West and New York City to the south. • Improve the Worcester Line to reduce the trip time and increase ridership on the East-West service (e.g., triple-tracking, level boarding, electrification). These costs should not be allocated to this project since these improvements should already be done for MBTA regional rail. • Phasing of the implementation. • Benefits of infrastructure improvements to existing Amtrak service starting with the Lake Shore Limited and to restoring the Inland Route via Springfield and Hartford that was dropped in 2004. The Boston-Springfield segment should be developed as the first leg of an alternative spine for the NEC as was outlined in the NEC Future study. • Add a station in Westfield that can serve that important Western Massachusetts city	Thank you for your comment. We appreciate your interest in the study. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. In January 2020, U.S. DOT released its Benefit-Cost Analysis guidance, including guidance related to project benefits. As noted in Chapter 6, MassDOT has recommended next steps to continue advancing the conceptual planning phase for East - West Passenger Rail, including more detailed study of economic and community benefits and impacts.
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- and can also serve much of the Berkshires if part of a first phase.
- State acquisition of all or part of the right of way to better control costs and service.
 - Improvements to RTA services that feed into East-West service to increase ridership.
 - Adding Housatonic service to build out the state rail network and increase mobility options via Pittsfield.
 - Quantification of benefits to freight service if passenger service runs in its own right of way.
 - Finally, if the goal is truly “East-West” service for all of Western Massachusetts then this should include the Northern Tier route as well.

The time is right for trains because the next Presidential administration will be even more supportive of passenger rail. Rail projects have a long lead-time; now is the time to be planning for the future.

99	Nicholas McGee	This is not a "go big or go home" scenario. The study shows 3 of the most expensive options, being implemented immediately. This does not need to be the case. Phasing is a great way to get something started and watch it grow. This will also help quiet the skepticism shown in the report on ridership and development in the affected towns and areas. And with a new federal administration who is historically in favor of infrastructure AND rail projects, there could be a lot of opportunity for federal help with the cost. Boston is a big region, and it typically gets the larger end of the wishbone when the statehouse is dealing out things. The East-West rail project could help both of these problems simultaneously as well. By allowing for frequent travel between places like Palmer and Springfield to Boston, those who work in Boston but cannot afford it can move to any town along the transit line, as numerous people have already along many of the commuter lines of the MBTA. This relieves congestion in the city itself, grants access to those in Western Mass who otherwise would not have it, and allows for growth in the spine of this connecting region between Eastern and Western Mass. Lastly, I think an independent study would greatly benefit the idea of an East-West Rail corridor. Having a team picked by Baker and his administration when he has clearly not put any clear thoughts into transit and has cut funding significantly, was a sure-fire way to have the team come back with this study's response of recommending another study and pushing the responsibility even further. An independent study by a group or organization with no claims to or stake in this project would be helpful to find out more accurate numbers on cost, revenue, and even emissions (I find it hard to believe that there will be more emissions with a rail system in place than there are currently, for example). In conclusion, I am a bit disappointed in the study's inability to look towards the future and see the long-term benefits of implementing such a system in the Bay State. The benefits and the promises of development, inter-regional connectivity, and a secondary route from Boston to NY far outweigh the negatives presented.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
100	Dominick Villane	Dear Mass DOT, Please know how important a West/East rail link is to the economic sustainability for Western Mass. Today it is impossible for us here in Western Mass. to leave here in the morning to attend important hearings on Beacon Hill and return home in the evening. I hear over and over it is too expensive to build. Truth is it will be too expensive not to build. We have a rare opportunity with our Senior Congressman Richie Neal sitting as Chairman of the Ways and Means Committee. Time will show this is the	We appreciate your interest in the study, and thank you for your comments. As noted in Chapter 6, MassDOT recommends an evaluation of funding sources and strategies.

		time for strong leadership to make this happen. Innovation and Technology will also help advance travel and and keep costs down. Thank you for considering this comment and plea.	
101	Carlene Tavares	Western Mass is the best kept secret - please help the East coasters discover - all the treasure nestled in the Berkshire Hills	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
102	Ben Sands	I think east west rail is a fantastic idea and we should prioritize making this train go as fast as possible so it will be a viable alternative to the mass pike. I also think it's silly not to consider extending this to Albany, which is a huge market and would increase ridership. Also this would allow connections to NYC, Montreal, VT, etc. Thanks for reading, Ben Sands Somerville Mass. bfs43@cornell.edu	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
103	Matthew Sanchez	East west rail is essential for the growth and development of all Massachusetts. Incorporating this development with the adding of third track express line from Worcester to Boston.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

104	David Guenette	The conclusions of current East-West Rail Study lack three characteristics: Intelligence, Ambition, and Imagination. The Alternative No. 6 is closest of the six outlined plans, but the failure to anticipate and consider other rail connections—of which Pittsfield to NYC or Housatonic Line is foremost—shows a relatively short-term frame of mind. Build out of infrastructure required building on active imagination and a willingness to think long-term. A guiding principle must be the significant reduction of automobiles and the alternative of an integrated transportation system that supports people moving about without requiring the ownership of personal automobiles; large cities (e.g., Boston) have pervasive public transportation (although in need of better investment and infrastructure development), but the further out west one goes, the absence of pervasive public transportation clearly is a major contributor to the study’s projected low ridership numbers. People need to get to the stations, but if they otherwise are forced into car ownership, their use of personal cars will continue. People—even those in large urban areas, but even more so beyond the borders of the biggest cities in Massachusetts—are economically oppressed by their need for personal automobiles due to the cost of purchase, maintenance, insurance, and fuel. A comprehensive passenger transportation can lessen this astonishingly high cost to individuals and thus freeing up personal resources for other important improvements within our economy and society. The fastest passenger rail service between Pittsfield (and connecting on to Albany and thus points west and connecting to NYC) and Boston is the best of these proposed plans, but even this plan is a significant failure of imagination. In twenty years’ time, improvements in technology will support autonomous electric vehicles that can be hired locally on an as-need basis and intercity rail is well-suited for long distance travel. Constraining plans to relative short-term timeframes contributes, no doubt, to the lack of imagining a better future, as does the short-term investment/payback mentality plaguing our country. Please do better. The place to start is the best of your plans, Option 6.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
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105	Toby Butterfield	I wish MassDOT would look at the bigger picture and the benefits that flow from making transportation regional. Boston to Albany service, with Worcester, Springfield and Pittsfield as intermediate stops, would be a boon to central and western MA and their business and tourist sectors. Albany’s population of nearly 100,000 and its Amtrak stations would allow connections to upstate New York, the Hudson Valley, Vermont and Canada.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.
106	Daniel Cantwell	To the Massachusetts Department of Transportation Thank you for allowing me to comment on the East West Passenger rail study. I live and work in New York State, but I have strong connections to the Commonwealth of Massachusetts and I visit and do business here often. I believe increased rail service to Western Massachusetts, with extended service to New York State, should be high on the list of transportation priorities for MassDOT. In May of 2019 I traveled to Boston via Albany using Amtrak’s Empire Service and the Lake Shore Limited. The fare was competitive (low), and it was an enjoyable, although long, trip. MassDOT should focus on immediate steps and provided an additional daily round trip to Albany via Springfield/Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited. This would be simple, low cost, start. I understand that detailed specifications for such a service are being discussed among rail advocates and experts. The Albany - Schenectady - Troy Metropolitan Statistical Area in USA is an intercity anchor with a population of over 800,000 and Albany is one of the country's busiest Amtrak stations, offering further transport connections for MA residents between upstate New York, the Mid-Hudson region, Vermont, and Montreal and Massachusetts. Extending East-West service the additional 38 miles to Albany provides greatly enhances network connectivity and a much larger terminal ridership market for trip origins and destinations to Western MA. Albany/Rensselaer station also has established train servicing facilities which could be used through leasing agreements rather than building new. That is why it is critical that New York State DOT’s Rail Division be included to work in this effort. Finally, given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy,	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.

investment in passenger rail should be given priority in the region's recovery plans.

Thank you,

Daniel H. Cantwell, Registered Architect, Owner, DHC Design

danielhcantwell@gmail.com

107	MARYJANE DUNLOP	MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	We appreciate your interest in the study, and thank you for your comments. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
108	MARYJANE DUNLOP	I feel strongly that MassDOT should be working with New York State on train service to Albany, with Pittsfield as an intermediate stop. Albany is an intercity anchor with a population of nearly 100,000 and one of the country's busiest Amtrak stations, offering further connections to upstate New York, the Mid-Hudson region, Vermont, and Montreal.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

109	Travis Pollack (MAPC)	Thank you for the opportunity to review on the draft report, and we appreciate the opportunity to serve on the advisory committee for the East-West Passenger Rail Study. We offer the following comments on the draft report. The study found that, while the alternatives could reduce rail travel times from Boston to Pittsfield by more than one hour, the high projected capital costs make implementation difficult, particularly given that the project would have difficulty qualifying for federal funding. Nonetheless, we agree that MassDOT should continue the analysis to determine how changing travel patterns and future federal, state, and local funding programs could be beneficial, including carbon pricing and Vehicle Miles Traveled (VMT) fees. We also offer these additional comments: Phasing: The study findings note that over two-thirds of the projected ridership is between Boston and Springfield. Future studies should consider an approach that includes an early phase of rail to Springfield with coordinated bus services connecting Pittsfield and Springfield. Other intercity passenger rail projects in the US have had similar bus/rail phased implementations that could bring insight into a phased implementation, with the goal of an ultimate one-seat passenger rail operation from Boston to Pittsfield. Future Travel Needs: We agree with the study recommendation to survey businesses and residents across the Commonwealth on how post-COVID travel and living trends, including work-from-home policies, might impact future travel and possibly make living outside of the Boston core more attractive. Findings from this survey would be helpful for the rail study as well other regional and statewide travel modeling. Operations and Governance: We agree with the recommendation for a white paper on governance structure options for passenger rail outside of the MBTA service area. The paper should include best practices from states that have successful state rail programs including Virginia, North Carolina, California, and Florida. This should also include an analysis of how these states coordinate with their freight rail partners. Funding Options: While the report includes a list of potential funding and finance options, a more detailed analysis of which funding and finance programs the project might qualify for, or show the most promise, would be helpful.	Thank you for your comment. We appreciate your interest in the study. As noted in Chapter 6, MassDOT has recommended next steps to continue advancing the conceptual planning phase for East - West Passenger Rail, including more detailed study of economic and community benefits and impacts, and an evaluation of funding sources and strategies.
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		Summary Table: The summary table 1-2 in the Executive Summary would be more useful if total travel times were included, as well as the number of projected round trips. The table should also include a footnote on where readers can learn more about the “Enhanced Hartford Line” and “Downeaster” scenarios in the report, as there is no explanatory text of these terms in the Executive Summary. Thank you for your consideration of our comments. If you have any questions, please feel free to contact me at tpollack@mapc.org. Sincerely, Travis Pollack, AICP Senior Transportation Planner Metropolitan Area Planning Council	
110	Jim Geary	As a resident of Worcester I strongly support east-west rail improvements in the Commonwealth. Not only would this improve mobility for Mass residents, but it would allow connections to CT, NY, VT, and beyond. While airports, seaports, and highways are often rightly viewed as "loss leaders" that must be expanded and improved to drive the economy, rail for some reason is expected to justify its own existence through fare collection. This is wrong. We must invest in rail regardless of revenue projections just as we must invest in our airports regardless of current flight density. East-west rail will pay	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.

		off tax revenue in the long run, and the Commonwealth must start now while borrowing costs are cheap, to provide a robust rail network for the next generation.	
111	Matthew Barison	This major undertaking is needed and would be a great benefit to the Commonwealth. I support the option that provides the fastest service, although even that option is not fast enough. I think we can do better and build a truly high speed rail system that does not share trackage (at least west of Worcester) with freight rail.	Thank you for your comments. We appreciate your interest in the study. Except when transitioning in and out of stations, two of the three Final Alternatives (Alternative 4 and 4/5 Hybrid) would operate along a new separate, passenger-only track between Springfield and Worcester. Between Pittsfield and Springfield, each of the Final Alternatives would increase capacity via the restoration of a missing double-track segment, but passenger trains would continue to share the corridor with freight movements.
112	Rev. Allison Stokes	I believe that we should be acting now to reform and revitalize our transportation sector with both climate mitigation (reducing pollution from transportation) and climate adaptation (making our transportation system more resilient to a changing climate). My conviction about this comes, in part, from attending a webinar about TCI on Tuesday, November 10th: "The Transportation and Climate Initiative: Clean Transportation for Rural Communities." Given that transportation contributes over 40% of Massachusetts' greenhouse gas emissions, and is the largest source of air pollution of any sector of the state's economy, investment in passenger rail should be given priority in the region's recovery plans.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state.
113	Heidi C. Bara	As a resident of Palmer, MA, "The Town of Seven Railroads", a train stop here would benefit 21 surrounding communities as well as revitalize Palmer's downtown. To be able to take a train to Springfield to watch a hockey game, Boston for a Sox game or museums and dinner. To be able to connect to NY City, Pittsfield to Albany and beyond to Canada. Boston needs Western Mass for affordable housing. The population in Western Mass would have access to more job opportunities in the city. If we can start with existing track, and as ridership increases , improvements can be made for a faster ride. The state	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.

		of Massachusetts needs East West Rail, with a stop in Palmer. Thank you	
114	Rep. Lindsay N. Sبادosa	Thank you so much for your work on the East-West rail study. It has been interesting to watch this process unfold. I believe, however, as we have progressed with the study, we have run into, time and time again, its fundamental flaw: it looks only at Massachusetts. Our state has never, in recent times, invested in public transportation outside of the Boston area. Now, with the East-West rail study, we are, for one of the first times, examining rail outside of the eastern half of the state. In this study, we are ignoring what we have learned from the Valley Flyer, a much smaller project but an important one; we must work with other states. New England is simply too small to discuss rail as something that starts and ends in Massachusetts alone. From calculating potential ridership to determining who runs the railway system, East-West rail must be viewed in the context as a second Boston-NYC corridor, and an inland one that is less affected by climate change. In order to proceed and best access federal funding, Massachusetts must collaborate with CT and NY on a plan to make this rail a reality. We must calculate estimated ridership based on where and how people will travel, i.e. between our major urban centers in the Northeast. Massachusetts must either decide we are in the railroad business or we must find the partner that can run a service that is going to be cost effective for riders. We need a realistic cost of all the land that must be taken in order to make the service happen, a clear picture of the environmental impacts, a real list of barriers to construction with potential solutions, and a plan to present to the federal delegation in NY, CT, and MA that will allow them to secure the necessary funding for what will be a once in a generation project. The Northeast’s infrastructure is failing on multiple fronts. Our roads were not built for high speed transportation. Our rail lines are barely usable, slow, and costly to maintain. Members of this advisory committee and the general public are asking the Commonwealth to make a bold investment and think beyond what we are currently	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development.

		doing to imagine what we could be doing. I hope that we will take this initial study and turn it into something that could be meaning not just for Massachusetts but for the entire Northeast region. We have the start of the second Northeast corridor within this study. We look forward to working with MassDOT as it explores the true potential of this rail and makes it a reality.	
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115	Thomas Matuszko (BRPC)	We appreciate the effort that has gone into the East/West Rail Feasibility Study which evaluates options for expanded passenger rail service across the Commonwealth. As you are aware, Berkshire County has very limited rail service. This study, along with the soon to be expected one for the northern route through Greenfield to North Adams, are key first steps in bringing about regularly scheduled service that will connect our region to other parts of the state. Our comments are intended to strengthen the integrity of the study and to clarify recommendations that will serve to set the direction for future efforts and lead to the implementation of reliable passenger rail service. Updated Cost Estimates Price estimates for the rail infrastructure improvements appear to be high and may overestimate the actual cost. It is recommended that a new price estimate for the improvements be developed by an organization whose main work is rail construction. This would likely improve the benefit cost ratio and provide a cost savings when the project proceeds to bidding/construction. Directly related to this, future efforts should focus on identifying ways to drive the cost down through innovation such as design build and public/private partnerships. Rail Service Operations and Oversight Discussion should be included regarding MassDOT’s ability to provide oversight on passenger rail services. Options should be explored and evaluated to determine the approach to providing oversight on statewide rail programs and operations. Public-private partnerships should also be investigated and assessed which may result in substantial cost savings and reduced financial risk. Economic Benefits The Benefit Cost analysis could be improved by taking into consideration the indirect economic benefits which will result from enhanced rail service. This new service will increase economic activity and add new jobs; increasing ridership above what is reflected in the study. This effect stemming from increased economic activity should be reflected in new ridership projections and the recalculation of the benefit cost. The draft report recommends working with local and regional governments to facilitate land use decisions. The final report should also include a recommendation for MassDOT to work with and actively engage local and regional governments to identify indirect economic benefits.	Thank you for your comment. We appreciate your interest in the study. While this conceptual study effort is focused on passenger rail service between Pittsfield and Boston, extensions or connecting service could be examined as part of any future permitting or project development. In January 2020, U.S. DOT released its Benefit-Cost Analysis guidance, including guidance related to project benefits. As noted in Chapter 6, MassDOT has recommended next steps to continue advancing the conceptual planning phase for East - West Passenger Rail, including further discussion with CSX, more detailed study of economic and community benefits and impacts, understanding governance options for expanded passenger rail service in Western Massachusetts, and exploring funding sources and strategies. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state.
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Commitment to Further Progress

Most of the recommendations contained in the draft study require further effort. MassDOT should commit to providing the necessary staff support and resources to move identified actions along and insure that they be completed in a professional and expeditious manner and do not languish. The final report should include a schedule for MassDOT to complete these efforts.

Preferred Alternative

BRPC recommends that the 4/5 hybrid be selected as the preferred alternative. It provides the fastest travel time, has the largest number of daily trains, and has the greatest potential for this alternative to achieve success. The draft report recommends keeping Alternatives 3 and 4 under consideration until additional information is known. It is recommended that only one alternative, the 4/5 hybrid, be selected as the only alternative so that it can be expeditiously advanced in greater detail.

Travel Time Improvement

The maximum speed between Springfield and Pittsfield is indicated as being 59 miles per hour. This is the slowest speed rating along the entire route. Improvements should be identified that would increase the average speed of 44 mph and improve the travel time of 1:12 hours between Pittsfield and Springfield.

Corridor Acquisition Analysis

All the alternatives developed in the study are based on the premise that CSX will remain the owner and based on CSX passenger rail requirements that are over burdening and costly. This has resulted in a significant number of improvements being required for the proposed service which come with a significant price tag. An alternative approach could be to acquire the corridor from CSX. A cost analysis could determine the price point where it would be more cost effective to acquire the corridor and lessen the amount of CSX required improvements. Also, by acquiring the corridor, passenger service would not suffer from operation decisions being made by a freight railroad.

Construction Phasing

It is recommended that construction of system upgrades for the preferred alternative, 4/5 hybrid, emanate out of Springfield in a simultaneous manner towards both Pittsfield and Worcester. This will serve to insure that connectivity to Pittsfield does occur and occur much sooner in comparison to construction of improvements beginning in Boston

or Worcester and moving west

Operating and Maintenance (O/M) Costs

The document lacks detailed data on O/M costs for the various alternatives. At a minimum, this information should be provided for the 4/5 hybrid alternative. This information is critical to determine the price point for tickets and to determine what level of subsidy will be necessary. Please add this information to final document along with any other anticipated revenue. Related to operations, the RTC rail corridor capacity analysis was not mentioned in the draft. Please add a discussion and include the analysis in the appendix to the final report.

Service Connection to Albany

The study’s recommendations should advise that this new east-west service should connect to Albany/Rensselaer and that MassDOT Rail and Transit Division initiate discussion with Amtrak and NYSDOT. By adding this 37 mile segment, additional options are created and can further increase ridership and provide additional economic opportunities.

Engage CSX

For this new service to become operational, approval from CSX is required. Conversation with CSX should begin immediately to be able to implement this east-west service in a timely manner. Waiting for some future point to start a dialogue would likely lead to further delays. Also, these discussions can be used to determine if CSX has any interest in selling this corridor.

Green House Gas Emission (GHG) Reductions

This study determined that the displacement of vehicles and mode shift to rail will not provide a net reduction in emissions due to high level of pollutant emissions from the locomotives. The study should recommend that more attention be given to identifying a cleaner fuel or another locomotive type that has lower emissions and results in lower GHG emissions.

Legislation and Funding

The final document should include a discussion on appropriations and authorization legislation to secure funding for this rail project at both the State and Federal level. Including policy recommendations for funding and corresponding amounts will assist

legislators as they develop their bills to acquire funds. The study is limited in its discussion on other potential funding sources and at a minimum a list of funding sources should be included.

We appreciate the opportunity to provide comments on the draft East/West Passenger Rail Study and trust that these comments will be addressed in the final document. BRPC is committed to improving mobility options in the region and looks forward to working with MassDOT in advancing this effort through to service implementation.

These comments were endorsed by the Berkshire Regional Planning Commission at its meeting on November 19, 2020.

116	Robert & Lynne Horvath	Two things: Sooner or later we are going to kill our world with travel and transport (car, bus, airplane) emissions. It's looking more like sooner. We must make high capacity vehicle travel available. For Pete's sake, look at Europe and Asia. 2) In Western Massachusetts, we want to grow our towns and economy despite weather problems,, but can't do it with such large distances and one major highway. We need easy, inexpensive travel (Amtrak is exorbitant).	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. MassDOT is committed to reducing greenhouse gas emissions and air pollution stemming from transportation in the Commonwealth and will continue to explore the environmental and social benefits that new and/or increased passenger rail service can provide throughout the state.
117	Ron Yapple	When our children were young in the early 2000's, we took two family trips from Pittsfield to Boston. The Lake Shore Limited ran late from Albany and the crawl over the Berkshire Hills seemed to last forever, and we sat while CSX freight took priority. Nonetheless we enjoyed our journey and accepted the extra time compared to the Mass Pike. Our trip was for leisure. A commuter daily trip, if over 3 hours would be out of the question. Even so, I support improved tracks, trains, and other infrastructure and will use the trains to Boston over the next 20-30 years in my retirement. I'd rather be relaxing, reading, and writing than sitting at a crawl on the Mass Pike. The absurdity of car travel for commuting and long-distance leisure should be obvious to everyone by now. I'll conclude with this: MassDOT should focus on immediate steps that would improve connectivity for western Mass. An additional round trip to Pittsfield in the morning and evening, to complement the existing daily Amtrak Lake Shore Limited, would be relatively simple and low cost, and I understand that detailed specifications for such a service are being discussed among rail advocates and experts. I'd like to see cooperation between all parties to implement this improvement as soon as possible.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts. As the existing rail corridor is owned by CSX west of Worcester, any passenger rail operator, even Amtrak, must comply with their terms and conditions. Current CSX guidance related to high-speed passenger trains requires the development a separate, passenger-only track to avoid interfering with freight movements wherever the passenger train operating speeds exceed 90 mph.
118	Amy Cairy	This service would open up many more job opportunities for myself and my family. Certainly, it would do the same for countless others.	We appreciate your interest in the study, and thank you for your comments regarding west to east passenger rail service in Massachusetts.
119	Adam Garvey	The East-West Rail would be game changing for the entire state. Palmer, the town of seven railroads has a perfectly, centrally location for a station. The Massachusetts Turnpike exit and route 20 lead you right into downtown Palmer, making an easy location for daily commuters. This project would benefit the entire state, offering Boston residents affordable housing. This opens up doors for western mass, with jobs and opportunities. Many area residents work in Boston and commute. I would rather spend my money in Massachusetts, rather than West Hartford, and Manchester CT. as the commute is so much easier. This project is way overdue, and EVERYONE would benefit.	We appreciate your interest and formal support in this effort, and thank you for your comments regarding west to east passenger rail service in Massachusetts. We are also confirming that a rail station stop in Palmer is in each of the Three Final Alternatives.